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COMPUTERWORLD®

Apocalypse Soon

If the Internet goes down, will you be ready?
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MASTER

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JANUARY 21, 2008
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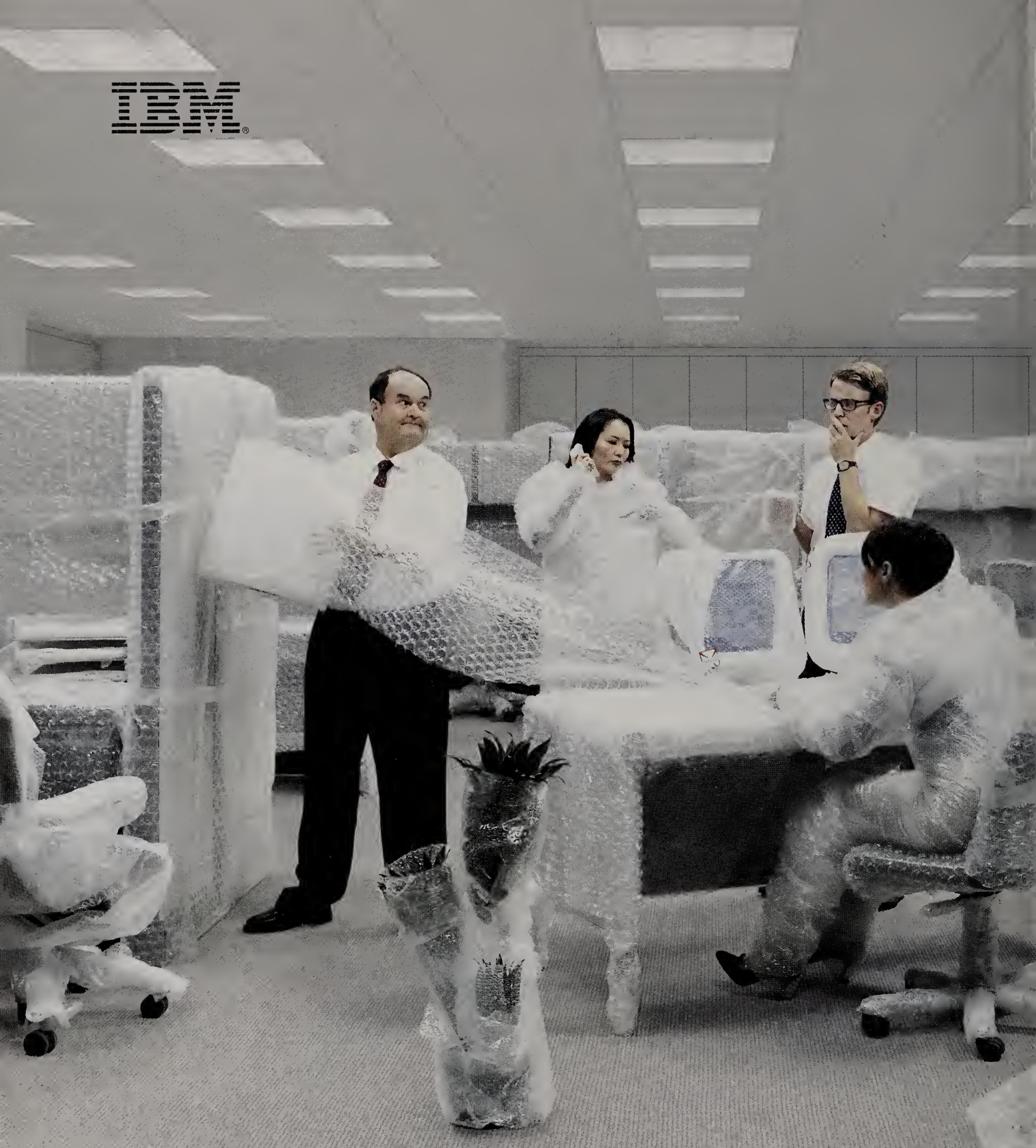

[1] Source: "Business Continuity Unwrapped," Continuity Central, 2006, www.continuitycentral.com/feature0358.htm.

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_INFRASTRUCTURE LOG

_DAY 82: There are so many risks out there. So many things that can happen to our business: natural disasters, spikes in traffic, mergers. How do we prepare? One in three companies don't recover from unplanned downtime.[1] Would we?

_Gil has wrapped everything in the office with bubble wrap. Everything. Just to be safe.

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_No more bubble wrap. And I have to mail a package. Great.

Tivoli.

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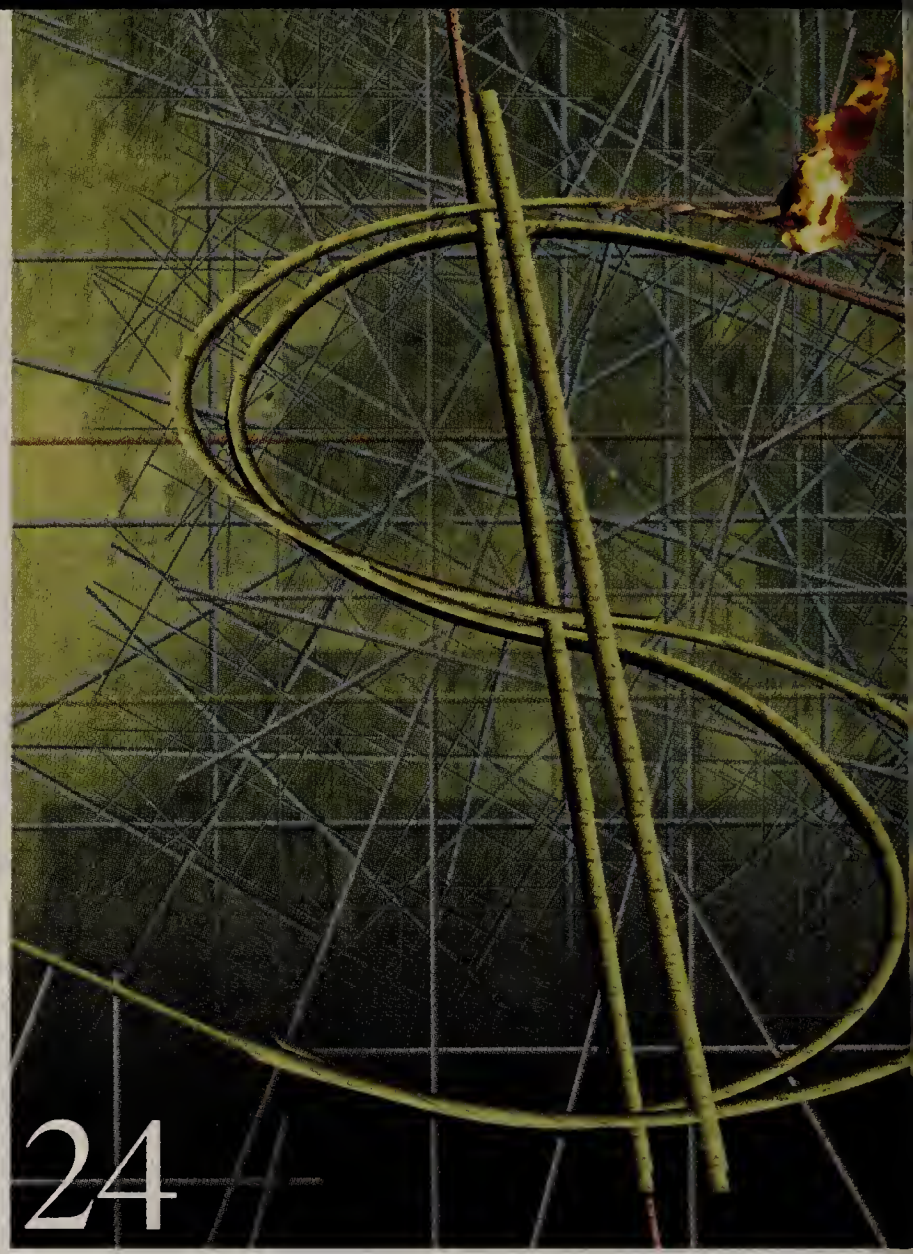

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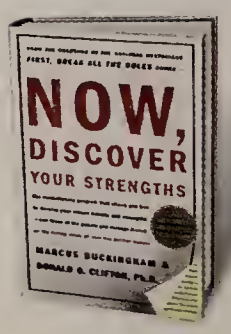


COVER ILLUSTRATION BY MICHAEL MORGENSTERN

>MEET STORM, THE LARGEST BOTNET TROJAN IN HISTORY
>WE DISSECTED IT, THEN WE DESTROYED IT

>WE LOVE IT WHEN IT GETS COMPLICATED

>CONVERGED THREATS ARE ALWAYS EVOLVING NEW WAYS TO GO UNDETECTED
>OUR UNIQUE SKEPTIC TECHNOLOGY TRACKS EVERY SUSPICIOUS LINK IN EVERY EMAIL & THEN SWEEPS THE WEBSITES FOR MALICIOUS CODE
>VISIT MESSAGELABS.COM/THREATS FOR A FREE TRIAL

MessageLabs | Be certain

IMAGE GENERATED USING SOURCE CODE FROM BOTNET TROJAN STORM

EDITOR'S NOTE

Don Tennant

Gut Check

WHEN WE REPORTED online last week that former CA CEO Sanjay Kumar had made the final payment on the $52 million in restitution he owed after pleading guilty to accounting fraud charges, some readers took the opportunity to express their disdain for Kumar and for what he had done that landed him in prison.

"They should leave him in there, where he belongs, but transfer him to a real prison," wrote one reader, referring to the fact that Kumar's lawyers are seeking to reduce his sentence at a minimum security facility in New Jersey. "This would be justice for the reign of terror he employed while at CA."

For the life of me, I can't figure out how the history of what really happened at CA has become so distorted. Reign of terror? You bet there was a reign of terror at that company. But it was hardly propagated by Kumar. Another reader who commented on the same story accurately identified the true culprit as CA founder Charles Wang. Yet this reader was equally misinformed.

"Sanjay fell into [the] wrong company," the reader wrote. Kumar "actually was good for Computer Associates, smoothing over bad relations with customers, eliminating many of the problems [inherited] from his father-in-law. Shame of it is that his father-in-law (Slick Charlie) didn't join him behind bars."

This isn't the first time I have heard from a reader who thought that Kumar is Wang's son-in-law, or have seen a reference to that effect elsewhere. I don't know how that myth originated, but it's not true. Kumar's wife, Sylvia, is not related to Wang.

I couldn't agree more that it's a shame Wang isn't behind bars. But I wonder why this reader, who identified himself as a former CA employee through an acquisition, bought into a myth that is so easily debunked.

Most of the former CA employees who have written to me agree that Kumar was thrown under the bus.

You bet there was a reign of terror at CA. But it was hardly propagated by Sanjay Kumar.

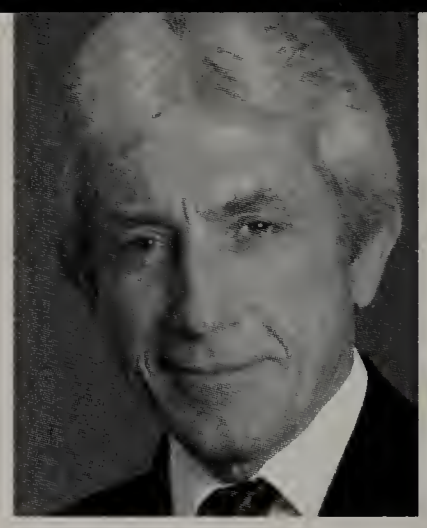
"Charles and his brother Anthony found a sucker, put him in the right place, and left him hanging in the breeze," wrote one.

"Charles and his inner circle were evil," claimed another. "Sanjay was truly the fall guy."

To the extent that Kumar made mistakes — and he did — justice was served when he walked into that prison compound last August. But as I wrote in a column in April 2006 after Kumar pleaded guilty to the charges, decent people do stupid things.

"It would be tragic if the miracle Kumar worked at CA — transforming it from the most intensely feared and loathed software company on the planet to a respected and valued business partner — is forgotten because of all this," I wrote. "Vilification, in Kumar's case, is unwarranted."

That column elicited a heartfelt response from an employee who worked for



Kumar for years at CA.

"I don't know what happened, maybe it was just getting caught up in the technology boom at the time," she wrote. "But all in all, he is the most decent human being I have [ever had] the honor and privilege of knowing and working for. He doesn't deserve this at all."

The same employee e-mailed me last August, eight days after Kumar entered prison. She was responding to the "Dear Charles" column I had written, in which I used a baseball doping metaphor in addressing Wang. I said that he's the one who shot the illegal performance-enhancing drugs into CA.

She noted that she and a co-worker had had breakfast with Kumar two weeks earlier to say goodbye. "He is such an amazing man. Very positive, stoic," she wrote.

"I can't believe you had the guts to write the truth about [Charles Wang] and CA," she added. "It needed to be told and come out."

It took no guts at all. What takes guts is owning up to your mistakes and paying for them. Food for thought for those in power when terror reigned. ■

Don Tennant *is editorial director of* Computerworld *and* InfoWorld. *Contact him at don_tennant@computerworld.com, and visit his blog at* http://blogs.computerworld.com/tennant.

ONLINE CHATTER

RESPONSE TO:

E-discovery Rules Still Causing Headaches

Jan. 7, 2008

This article perpetuates a couple of myths about the "new" federal rules and what IT professionals should do to deal with discovery in litigation.

First, it is information content, not media type or "format," that controls. Discovery has always been about finding retained information, not data. Hence the creation of the category of electronically stored information to supplement "documents" and "physical things" as discoverable evidence. Further, the rules do not mandate that information be produced in native file format. They require any format conversion be to a "reasonably usable form" to prevent abuses that began in the mid-'90s. Abuses like spending millions to print e-mail, move it off-site, scan the paper to TIFF and then OCR the TIFF to get machine-readable text, when that's what you had to start with. Thus, the rules are very far-reaching and designed to accommodate new technology.

Moreover, professional records managers have known for decades that it is content that controls retention. Put another way, it is the subject matter of the information in the e-mail that determines its retention value, not the fact it was created or stored in an e-mail system. In my experience, IT fails to talk to records managers, the perceived "paper pushers," who have content and retention categories for everything important. The rules don't change this paradigm, except to create the one "supernumerary" content class — the "litigation hold" class.

If your records manager or businessperson printed an e-mail and was required to hold the printed version for seven years, the same rule applies to the e-mail in digital storage. Forget about 90-day purge rules, or you will live a perilous life.

Last, tape backup for disaster recovery is not archiving. If you aren't archiving to tiered storage, plan to start as soon as possible. Leave the tapes to DR and bring them out only in the event everything else fails.

Submitted by: *William Kellermann*

JOIN THE CHATTER! *You, too, can comment directly on our stories, at* **computerworld.com**.

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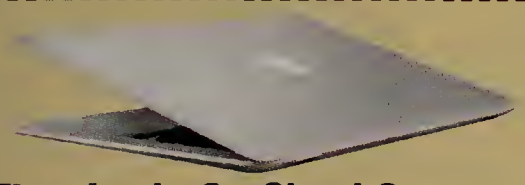
EMC to Replace Some Disks With Solid-State Drives

This quarter EMC will ship a line of solid-state drives with flash memory as an option to replace some disk drives in the company's high-end Symmetrix storage arrays.



First Look: On Cloud 9 With Apple's MacBook Air

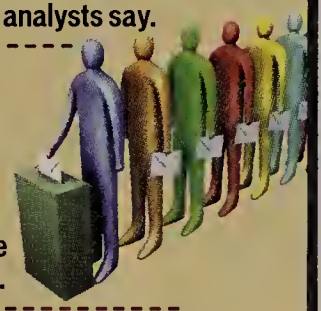
***Computerworld*'s Ryan Faas calls the new subnotebook "truly innovative" but says current Mac users will have to change the way they work to get the most out the slim-line laptop. FireWire and Ethernet ports are no longer included, for instance.**

How the Spectrum Auction Could Change Your Life

This week's auction of large chunks of wireless spectrum could lead to healthier competition and more devices, some analysts say.

Could Postballot Audits Renew Faith In Elections?

Supporters of e-voting reform say the time is now to mandate random counts after elections.



Opinion: At the Airport, An ID Theft Takes Flight

Like to people-watch at the airport? Jon Espenschied does – and he spotted a well-dressed woman Dumpster-diving. She may have been looking for your personal data.

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News Digest

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THE WEEK AHEAD

MONDAY: General sessions begin at Lotusphere 2008, IBM's conference for Lotus users, in Orlando.

TUESDAY: Apple plans to report its first-quarter financial results. Other vendors due to release earnings reports this week include Sun Microsystems and Sybase, both on Thursday.

SATURDAY: The group Computer Professionals for Social Responsibility holds a one-day conference on technology use in wartime, at Stanford Law School in Palo Alto, Calif.

SOFTWARE

BEA, Oracle Users Fear Price Hikes, Product Line Cuts

ORACLE CORP.'S agreement to buy BEA Systems Inc. for $8.5 billion prompted users of both firms' products to express fears of price increases and product consolidation.

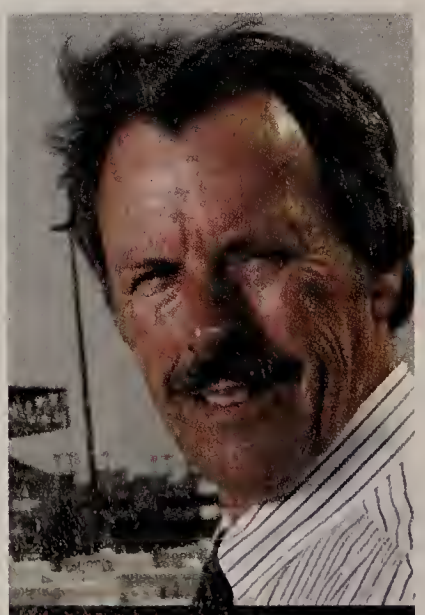
The BEA board agreed to the deal last week, three months after it had spurned Oracle's earlier $6.7 billion bid for the middleware vendor.

Burc Oral, a senior architect at government contractor CellExchange Inc. in Cambridge, Mass., said that on the positive side, the deal will make it possible for users to buy databases and application servers from a single vendor. On the other hand, Oral anticipates that it will cause some confusion for BEA users because of technology overlap.

Oral said that he expects that the deal will likely mean the death of some products — "a little from Oracle and a lot from BEA."

He added that Oracle would be well served to retain BEA's WebLogic application server. "[BEA] had [WebLogic] many years before Oracle was out there," Oral said. "BEA has always been very friendly to the user community with downloads and documentation. Oracle doesn't have this wide acceptance from the user community."

Jim Burgard, assistant vice chancellor of university computing and communication at the University of New Orleans, said that he has "some concerns about future licensing and maintenance costs, now that all the components are owned by one vendor."



JIM BURGARD of the University of New Orleans has "some concerns" that the deal will lead to higher prices for Oracle and BEA products.

Mike Gilpin, an analyst at Forrester Research Inc., said that Burgard's fears are not unfounded, and he suggested that support costs for BEA products could grow after the deal closes. And if BEA users move to Oracle's technology, he added, they will have to pay for migration.

Gilpin also noted that "it's not in Oracle's interest to aggravate these customers. In many cases, they are already Oracle customers."

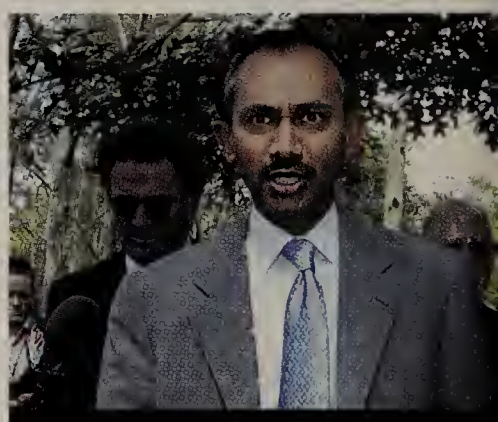
Todd Langille, project manager of administrative computing at Dartmouth College in Hanover, N.H., said he wonders whether Oracle has a "clear, coherent strategy" for its growing software portfolio.

Patricia Dues, enterprise program manager for the city of Las Vegas, said she hopes that Oracle can use BEA's technology to upgrade its own offerings, such as Oracle Business Intelligence Enterprise Edition, which the city recently purchased.

"We realize what Oracle has done with other acquisitions in taking the best of both worlds. This sparks our interest," said Dues.

The deal is expected to close in October.

— Brian Fonseca and Heather Havenstein



LEGAL ISSUES

Kumar Pays Final $2M in Restitution

Jailed former CA Inc. CEO Sanjay Kumar (above) has made the final $2 million restitution payment he owed for his involvement in a $2.2 billion accounting scandal at the vendor, his attorney said last week.

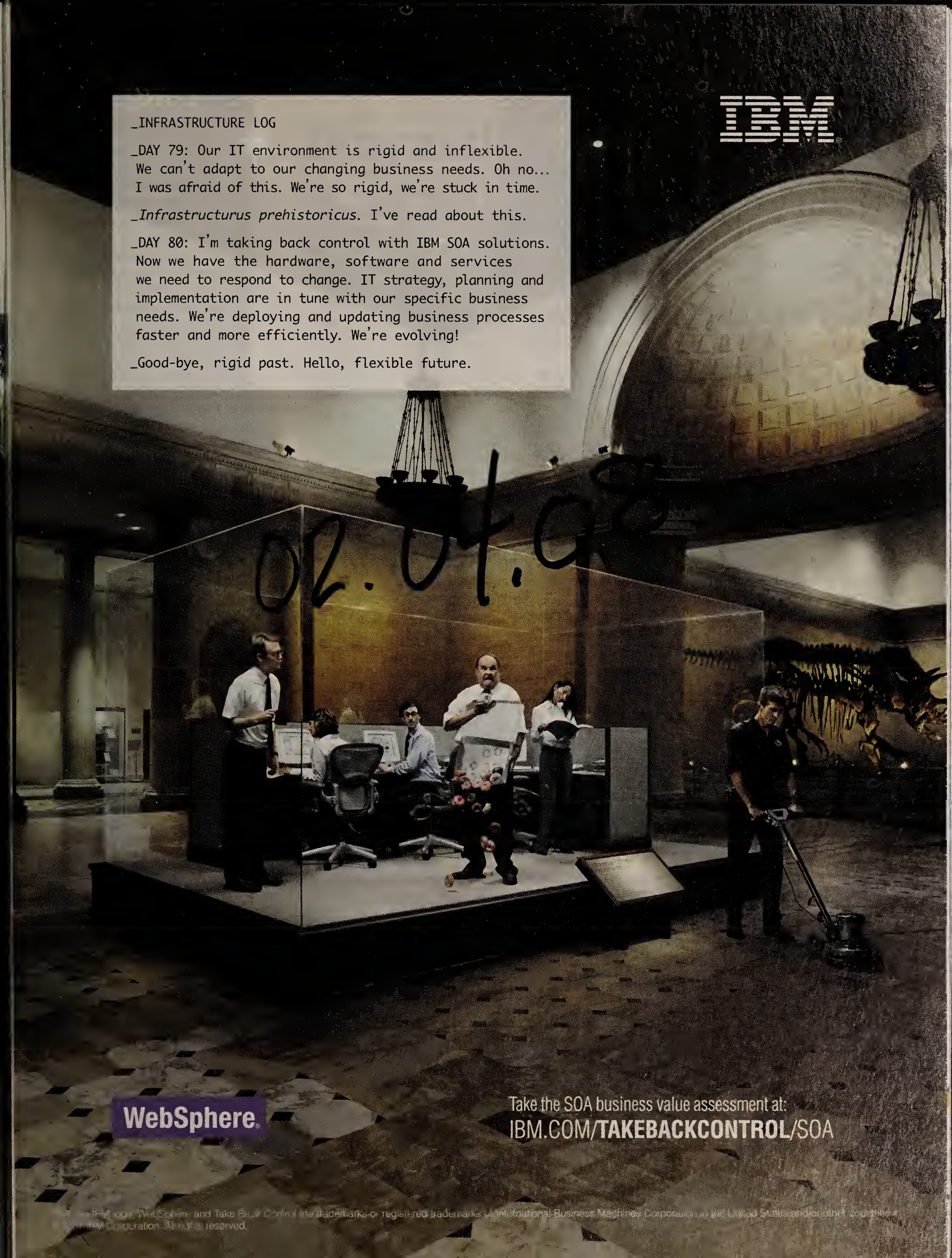
Kumar was under a court order to repay $52 million to victims of the fraud.

He is jailed at the Federal Correctional Institution in Fairton, N.J., and is scheduled to be released in 2018, according to the Bureau of Prisons. Kumar has appealed the sentence, said his lawyer, Lawrence McMichael.

"He's holding up just fine and doing the best he can while taking courses and doing a few jobs," McMichael said.

Kumar reported to prison in August, after pleading guilty to fraud and obstruction of justice charges. His guilty plea cut the restitution order from $1.02 billion to $52 million.

– MATT HAMBLEN



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JACEK CHABRASZEWSKI/FOTOLIA

SECURITY

MySpace, States Sign Kids Online Safety Pact

MYSPACE INC. and 49 state attorneys general last week culminated two years of discussions by agreeing to a new set of principles aimed at stepping up online safety on MySpace and other social networking sites.

As part of the agreement, MySpace will add some 60 new features intended to protect children from online predators, the attorneys general and MySpace officials said during a press conference in New York.

The pact also calls for MySpace to create a panel called the Internet Safety Technical Task Force, with representatives from other social networking sites, security vendors and online safety advocacy groups.

The task force will evaluate and develop new age- and identity-verification tools and issue findings and recommendations by the end of this year, the attorneys general said.

Roy Cooper, North Carolina's attorney general and co-chairman of the attorneys general's task force on online safety, said that the agreement "should set the standard for social networking sites across the globe that have been quick to grow but slow to recognize their responsibility for keeping kids safe."

Cooper's task force includes MySpace and officials from 49 states and the District of Columbia.

Hemanshu Nigam, chief security officer at MySpace and Fox Interactive Media Inc., both owned by New York-based News Corp., urged other social networking sites to join the partnership with the attorneys general.

Connecticut Attorney General Richard Blumenthal, co-chairman of the task force, noted that despite the accord, there remains an ongoing disagreement about whether it's possible for MySpace to really authenticate the age of its users.

"There was a difference in perspective between the attorneys general and MySpace on the feasibility of new technology that would authenticate age and identity," he said. "We are not papering over or concealing our continued differences."

Fears that the MySpace plan will not work to protect users from predators prompted Texas Attorney General Greg Abbot to decide not to join the effort.

— Heather Havenstein

Short Takes

■ **Sprint Nextel Corp.** announced plans to lay off about 4,000 employees and close about 125 retail outlets as a result of a net loss of more than 100,000 customers in the fourth quarter. The company said the moves will cut costs by $700 million to $800 million annually.

■ **Microsoft Corp.** has hired former **Walt Disney Co.** IT executive Tony Scott as CIO. Scott replaces Stuart Scott, who left Microsoft in November. The two are not related. Tony Scott reports to COO Kevin Turner.

■ **VMware Inc.** has agreed to acquire **Thinstall**, a privately held application virtualization software company. VMware said Thinstall's technology will help it expand its desktop virtualization capabilities.

■ **Cognos Inc.** unveiled the third release of its Cognos 8 BI tools, which are designed to provide more-targeted performance management information to a broader set of users. A day earlier, the BI vendor's shareholders had approved its $5 billion acquisition by **IBM**.

OPEN SOURCE

IBM's Jazz Edges Closer to Open Source

IBM LAST WEEK opened its Jazz.net community to anyone who wants to provide feedback on the technology, which is intended to improve collaboration among software development teams.

Carey Schwaber, an analyst at Forrester Research Inc. in Cambridge, Mass., said the move marks the first time IBM has committed to release any part of Jazz as open source.

Opening Jazz.net "is a natural step – especially if they want to get a community built around this," she said. "That is what makes or breaks an open-source project."

The Jazz.net community – which was launched in June – could previously be accessed only by customers and academics invited by IBM. The site will now provide all comers with access to Jazz code, bug lists and other details.

Company officials acknowledged that IBM still owns the Jazz source code and agreed that it's not a classic open-source project like Eclipse – yet.

"[Jazz.net] is an open commercial community designed to build and evolve the Jazz technology," said Scott Hebner, IBM Rational's vice president of marketing and strategy.

But he added that IBM does plan to eventually open the Jazz source code as it did with Eclipse. "The ultimate goal is very similar to Eclipse," he said.

– HEATHER HAVENSTEIN

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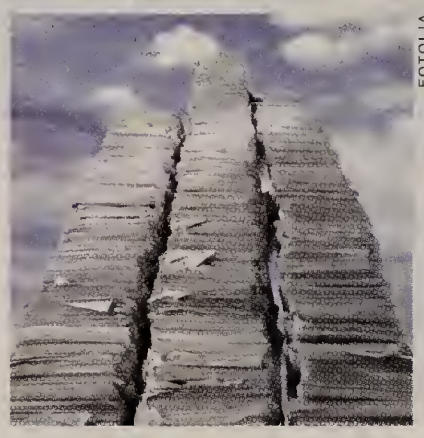
DESKTOP APPLICATIONS

Open XML Changes Get Put Down on Paper – Lots of It


FOTOLIA

THE STANDARDS body pushing Microsoft Corp.'s Office Open XML document format for approval as an ISO standard published a 2,300-page document last week addressing complaints and suggestions made by ISO members.

Under ISO rules, Ecma International's full document can be viewed via a Web portal only by members of national standards bodies. But Geneva-based Ecma openly posted a summary of the key changes made to the Open XML standards proposal, which failed to win enough votes in initial balloting last September.

The changes include the sidelining of a graphics-rendering technology used by few vendors other than Microsoft, and the addition of more information on how Open XML, the native file format in Office 2007, supports file compatibility with older versions of Office.

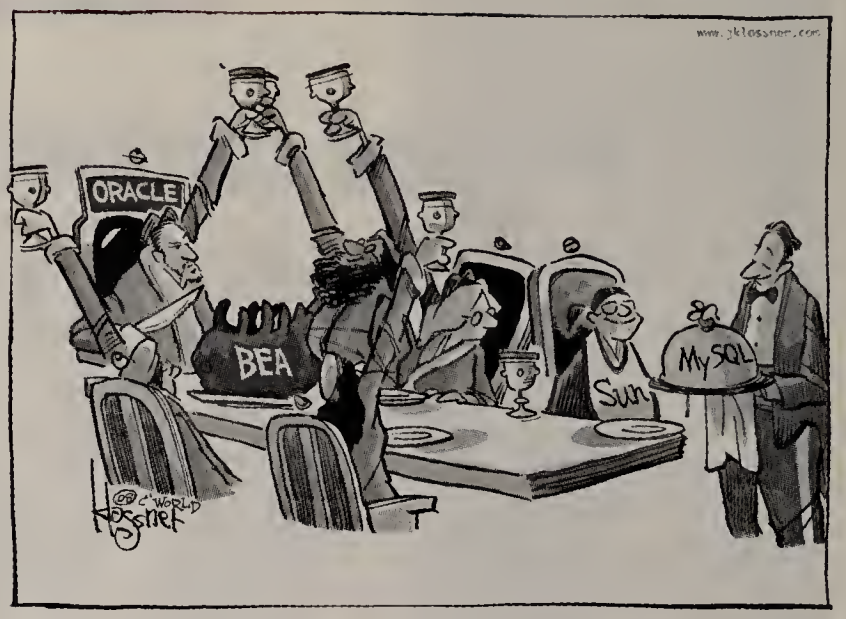
The length of Ecma's response isn't surprising, since ISO members submitted 3,522 written comments about Open XML in the wake of the September vote. A second vote is scheduled for late next month.

The rival Open Document Format for Office Applications, or ODF, has already been ratified as a standard by ISO. But Burton Group, a consulting firm in Midvale, Utah, issued a report last week predicting that ODF will have only "a minor role" in IT installations compared with Open XML.

Marino Marcich, executive director of the Open-Document Format Alliance, retorted that many users have adopted "a buyer-beware attitude" toward Open XML because it would "tie them to the upgrade path of a single vendor."

— Eric Lai

BETWEEN THE LINES *By John Klossner*



BENCHMARKS LAST WEEK

SAP AG and Business Objects SA jointly announced their first product bundles as part of SAP's planned acquisition of the business intelligence vendor.

Gregory Reyes, former CEO of **Brocade Communications Systems Inc.**, was sentenced to 21 months in prison and fined $15 million for his role in a stock-options backdating scheme.

ONE YEAR AGO: The TJX Companies Inc. disclosed a massive security breach that it has since said involved the theft of 45.6 million credit and debit card numbers from its systems.

Global Dispatches

EC Launches New Probes of Microsoft

BRUSSELS – The European Commission last week opened two new antitrust investigations into Microsoft Corp.'s activities.

The first case, based on a complaint from the Brussels-based European Committee for Interoperable Systems, concerns the interoperability of Windows with other software.

The second investigation, based on a complaint by Opera Software ASA in Oslo, is looking into Microsoft's tactic of bundling software with its Windows operating system.

Both new probes build on the findings of the EC's 2004 antitrust ruling against Microsoft, which the vendor unsuccessfully challenged. In a statement, Microsoft said it "is in full compliance with European law and our obligations" under the antitrust ruling.

Paul Meller,
IDG News Service

Nokia Cuts 2,300 German Jobs

ESPOO, FINLAND – Mobile phone maker Nokia Corp., based here, has announced plans to lay off 2,300 employees at a plant in Bochum, Germany, and move production to lower-cost European sites.

The company said the Bochum plant will close by mid-2008.

"Production of mobile devices in Germany is no longer feasible for Nokia," Veli Sundbäck, executive vice president of Nokia, said in a statement. "It cannot be operated in a way that meets the requirements for global cost efficiency and for flexible capacity growth."

Nokia said it will negotiate with employee representatives to "reach a satisfactory solution" for everyone involved.

Grant Gross,
IDG News Service

BRIEFLY NOTED

Microsoft last week said that it has provided computer training to 200,000 teachers in India, beating its goal of training 80,000 Indian teachers during the five-year period ending in December 2008. The company launched the program, called Project Shiksha, in 2003.

John Ribeiro,
IDG News Service

4.21.08

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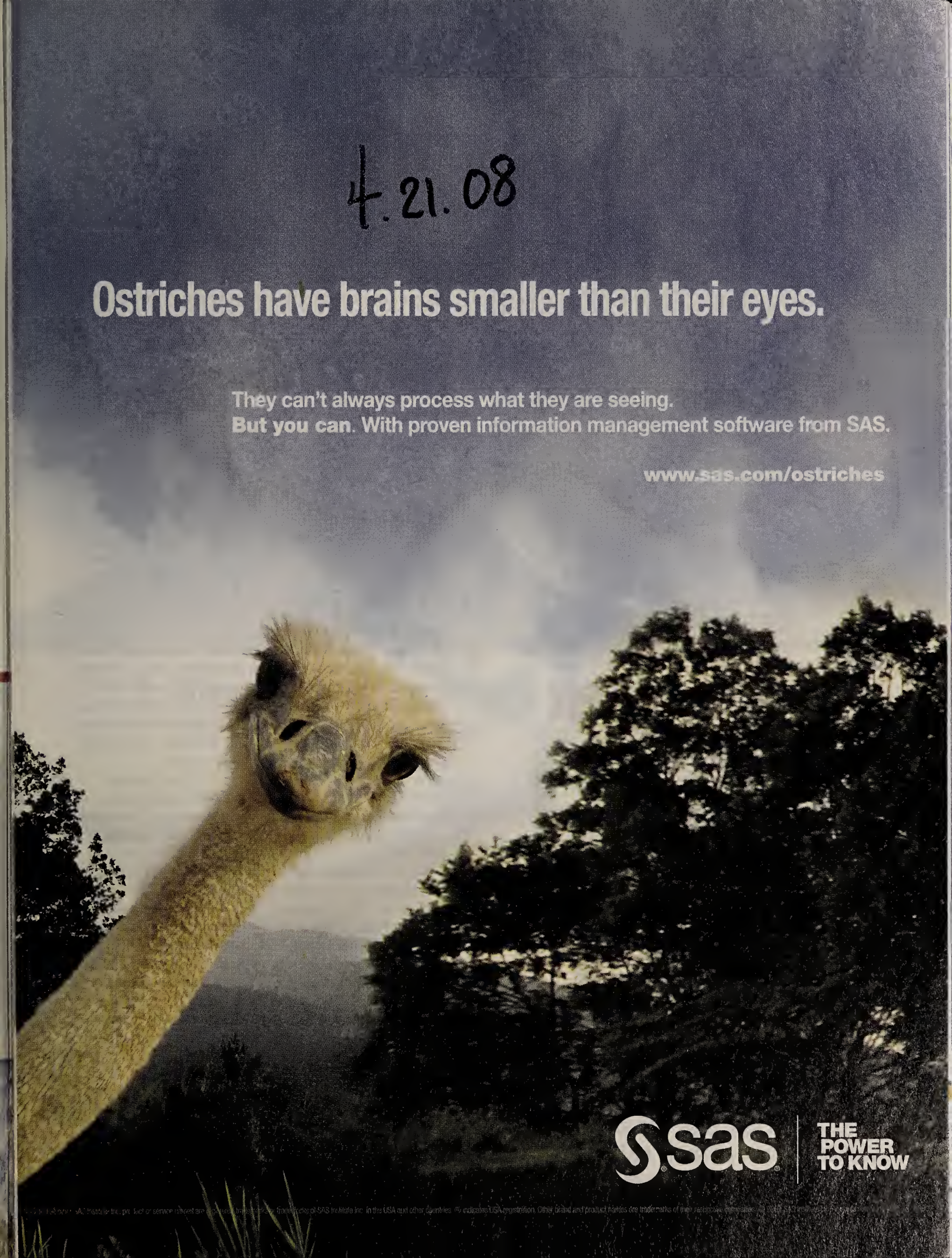

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ANASTASIA VASILAKIS

THE 'HACKER SAFE' SEAL: Shield OR Target?

Critics claim that Web site vulnerability scans can give companies a false sense of security. But users say that the scans are a valuable part of their online defense strategies. By Jaikumar Vijayan

MORE THAN 80,000 Web sites worldwide display a small green logo that proclaims them to be "Hacker Safe." The logo is provided to them by ScanAlert Inc., a vendor that scans the sites of its clients daily in search of security vulnerabilities.

ScanAlert's logo is the most widely used security seal of its kind on the Web, and it can be found on dozens of marquee-brand sites, including those of Johnson & Johnson, Sony and Warner Bros. Such widespread use attracted the attention of security vendor McAfee Inc., which in late October agreed to acquire ScanAlert.

But Napa, Calif.-based ScanAlert was put on the defensive this month after online technology retailer Geeks.com warned an undisclosed number of customers that their personal and credit card data may have been compromised in a hacking incident. Geeks.com, whose formal name is Genica Corp., displays the Hacker Safe logo at the bottom of its home page.

A ScanAlert spokesman said "preliminary evidence" suggests that the breach likely occurred during one of several periods last year when ScanAlert had withdrawn its certification from Geeks.com after finding vulnerabilities on the Web site.

Even so, the incident at Geeks.com has rekindled a debate about the value of security seals such as the Hacker Safe logo.

ScanAlert users say that the scanning service can sniff out at least some security problems and that the logo is a valuable marketing tool for them.

On the other hand, ScanAlert's detractors say the service can give companies and their online customers a false sense of security. Indeed, hacker groups have claimed that they have targeted and broken into numerous Web sites displaying the Hacker Safe logo.

"Hacker Safe seals are completely ludicrous," said David Kennedy, who heads SecureState LLC's profiling and e-discovery practice. SecureState is a consulting firm in Cleveland that offers security risk assessment services and does manual penetration testing of systems and networks for its clients.

ScanAlert's automated probes offer a "very basic form of vulnerability identification," Kennedy claimed. They focus more on spotting network vulnerabilities than on detecting harder-to-find Web application flaws, such as SQL injection and cross-site scripting vulnerabilities, he said.

"Web applications are very dynamic and ever-changing," whereas vulnerability scans rely on static information to identify security issues, Kennedy said. He noted that after being asked to do security assessments by 10 companies with Hacker Safe logos on their Web sites, SecureState was able to break into nine of the sites and easily access financial and customer data.

Adriel Desautels, chief technology officer at Netragard LLC, a Mendham, N.J.-based company that offers manual vulnerability testing services, said automated scans can

Continued on page 14

3.10.08

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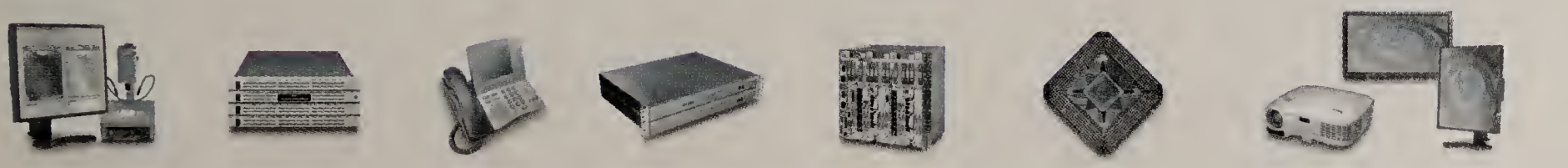

IT SERVICES AND SOFTWARE ENTERPRISE NETWORKING AND COMPUTING SEMICONDUCTORS IMAGING AND DISPLAYS

NEC is proud to have the No. 1 worldwide ranking in enterprise telephony extension line shipments in 2006, for the second year in a row, according to Gartner.*

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Empowered by Innovation

NEC

Continued from page 12

be useful in ensuring that a Web site is protected against known security flaws. "They make sure that network security is not a complete disaster," he said.

But automated scans don't work as well with customized Web applications and e-commerce environments, Desautels contended.

In addition, they do next to nothing to test Web sites against less commonly known vulnerabilities, he said, adding that those are the flaws most likely to be exploited by black-hat hackers.

"We had a major financial institution customer that had passed an automated vulnerability scan and intrusion testing," Desautels said. "Everything appeared to be working, but then we came in and by the end of the third day, [we] had penetrated 17 of their internal systems."

Tim Dowling, vice president of consumer growth initiatives at McAfee's Web security group, said it's unreasonable and naive to expect any IT security service to provide 100% protection against online threats.

"Hacker Safe is not perfect," Dowling acknowledged. But he said that ScanAlert's service does help users defend their Web sites against "thousands and thousands" of threats. And sites that sport the seal are far more readily trusted by consumers than those that don't, he claimed — a contention that was backed up by several ScanAlert users.

According to Dowling, a full 90% of the scans that ScanAlert performs on a daily basis are automated. But in cases where sites fail the vulnerability scans, the vendor may do manual penetration testing to help its clients understand and correct security problems, he said.

VIEWPOINTS

"The technical side of me says there is limited use here from a security perspective. The marketing guy in me says it's a no-brainer.

BILL CRONIN, MANAGER OF E-COMMERCE AT THE VERMONT TEDDY BEAR CO., A SCANALERT USER

We had a major financial institution customer that had passed an automated vulnerability scan. But then we came in and by the end of the third day, [we] had penetrated 17 of their internal systems.

ADIEL DESAUTELS, CTO, NETRAGARD LLC

And contrary to the claims of Kennedy and Desautels, ScanAlert does look for problems such as SQL injection and cross-site scripting flaws, Dowling added.

He noted that the date-stamped Hacker Safe seal is served and controlled entirely by ScanAlert and is withdrawn any time a Web site fails to pass the daily vulnerability scan. Since new vulnerabilities arise frequently, Dowling said, it isn't uncommon for sites to lose and regain their Hacker Safe status, as Geeks.com did last June and December.

The Hacker Safe service should be just one part of a multilayered security strategy, said Jay Greenberg, director of e-commerce at Spencer Gifts LLC, a novelty gifts retailer in Egg Harbor Township, N.J.

"This is one additional tool that you can utilize to help secure your site," Greenberg said, adding that IT and Web site managers also "have to be smart and diligent about making sure your developers are monitoring and checking" for security flaws as well.

In addition to helping secure Web sites at the back end, ScanAlert's service can boost sales by making consumers "feel comfortable" about doing business on a site, Greenberg said.

Before joining Spencer Gifts, he worked for another company that was a ScanAlert client. Greenberg said that to test how useful the Hacker Safe logo was from a marketing standpoint, the company — which he declined to identify — asked ScanAlert to make the seal visible to only about half of the visitors to its Web site. The test showed that more of the people who could see the logo bought products, he said.

NO GUARANTEE

Jay Cline, president of Minnesota Privacy Consultants and former chief privacy officer at hospitality industry conglomerate Carlson Companies Inc., has been a ScanAlert customer for about a year. Using the Hacker Safe service certainly doesn't guarantee that hackers will never be able to break into a Web site, said Cline, who also is a *Computerworld* columnist.

"What I'm buying is a service that keeps me safe from hackers that use known vulnerabilities," Cline said. "I'm aware that there's still [other risks] that I need to watch out for."

ScanAlert has helped identify security problems that might otherwise have been missed, Cline said. For example, during the initial sign-up process, a scan pointed him toward a cross-site scripting vulnerability that resulted from the way his site was being hosted by an external Web site developer.

A logo proclaiming that a site is safe from hackers could sometimes be seen as an open invitation for malicious attackers to try to crack the site, Cline acknowledged. But like Greenberg, he said that the Hacker Safe seal can be a valuable tool for convincing consumers to complete transactions and not be scared away by any security concerns.

"If you're looking for ROI, Hacker Safe on balance gives you more lift," Cline said.

Bill Cronin, manager of e-commerce at The Vermont Teddy Bear Co. in Shelburne, Vt., also said that he has been able to justify the cost of the ScanAlert service from a marketing standpoint.

When it comes to actually boosting the security of a Web site, though, the benefits are somewhat less obvious, Cronin said. He added that ScanAlert can help users identify some pretty obvious flaws that most IT departments really should be finding on their own in the first place.

"If they're coming up with vulnerabilities on your site, you really aren't doing your job as a security administrator," Cronin said. "The technical side of me says there is limited use here from a security perspective. The marketing guy in me says it's a no-brainer." ■

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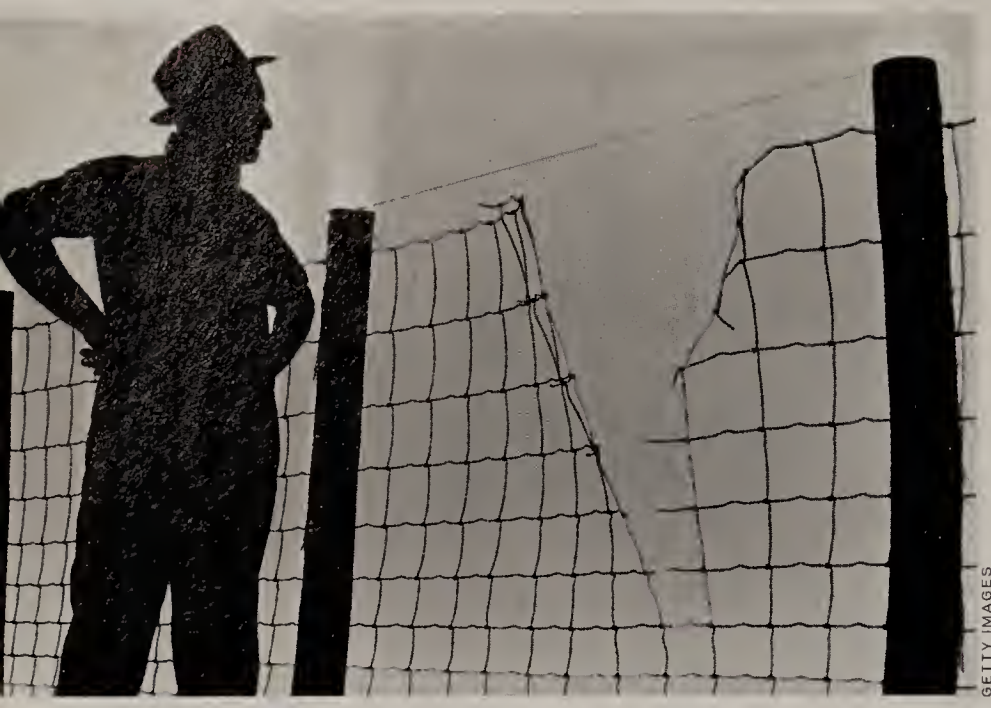

GETTY IMAGES

Users Say Sun Needs to Fix What's Broken At MySQL

Sun's $1B buy will give it an open-source database — and some unhappy customers.

By Patrick Thibodeau

IN AGREEING last week to pay $1 billion for MySQL AB, Sun Microsystems Inc. said it hopes to make MySQL's open-source database more attractive to enterprise customers. But Sun has a lot of work to do, according to some MySQL users.

And it isn't just technical fixes that are needed, they said. Although Sun described MySQL as "an open-source icon," it also will have to mend fences with users who are unhappy about the database vendor's sales tactics and complain that it has ignored their development suggestions.

For instance, within hours of the proposed acquisition's announcement, Don MacAskill, CEO of SmugMug Inc., said in a blog posting that he is "seriously considering" not renewing the online photo-sharing service's MySQL Enterprise support contract. "I probably wouldn't pay for MySQL as it stands today," he wrote.

In an interview, MacAskill said MySQL has performance problems when it's paired with InnoDB, the most widely used storage engine for the database. In particular, the problems affect systems with multicore processors. "That's turning out to be a pretty major scalability roadblock for a lot of us," he said.

Google Inc. and other MySQL users have developed patches to fix the problems. But MacAskill said that the open-source vendor has yet to add the patches to the database, despite requests that it do so from him and other users.

Zack Urlocker, MySQL's executive vice president of products, said it has applied two patches dealing with the performance problems — one in September and the other this month. But he added that he didn't know whether those patches addressed MacAskill's complaints.

ADDITIONAL CONCERNS

There are plenty of other things that also need fixing in MySQL, according to a blog posting by Jeremy Cole, who formerly used the database at Yahoo Inc. and is now a MySQL consultant at Proven Scaling LLC.

"There are a lot of areas where MySQL has been lacking for a long time, and the power users have been either crying in their beer or doing the work themselves," Cole wrote. For instance, he cited problems with the database's replication, logging and internal memory-allocation features.

In addition, Cole criticized MySQL's sales and marketing team and said that the company's development model for MySQL Enterprise is "broken."

Jonathan Schwartz, Sun's CEO and president, said during a teleconference that the biggest impediment to MySQL's growth has been its inability "to give peace of mind to a global company that wants to put MySQL into mission-critical deployments." Schwartz added that the open-source database will benefit from Sun's broader enterprise reach.

Sun already distributes the PostgreSQL open-source database on its Solaris-based servers. But Schwartz described the purchase of MySQL as "the most important acquisition" made by the company thus far.

However, the deal could complicate Sun's relationship with Oracle Corp., Sun's largest database partner. MySQL competes directly with Oracle and other database vendors. Also, Oracle owns InnoDB, having bought its developer in 2005.

"Now that [MySQL] is going to be supported by a major vendor, there's lots of companies that are going to give it a serious look," said Robert Lepanto, Oracle applications manager at AppCentric Solutions LLC in Stamford, Conn. "I would think that's a serious long-term threat to Oracle."

Lepanto, who also is president of the New York City Metro Oracle Applications Users Group, added that he's surprised Oracle "didn't buy [MySQL] first to squash the competition."

Daniel Grim, executive director of networks and systems at the University of Delaware in Newark, has an enterprisewide Oracle license but also sees value in the open-source databases.

"We've often found Oracle is more complex and more cumbersome than things like PostgreSQL and MySQL are," Grim said. "So we use those for small applications, although some of [the] applications are quite large, such as monitoring networking traffic." ■

Brian Fonseca and Eric Lai contributed to this story.

On the Mark

HOT TRENDS ■ NEW PRODUCT NEWS ■ INDUSTRY BUZZ BY MARK HALL

MATTHEW FAULKNER

Sharks Hungry for IT Staff

INFORMATION TECHNOLOGY execs may want to protect their staffs as legal sharks begin to hunt for tech talent. For the past 15 years, AXS-One Inc. in Rutherford, N.J., has been selling its information-archiving technology to IT departments. But, says Marie-Charlotte Patterson, vice president of market strategy, something changed last year. "We're just as likely to be talking to a room full of lawyers and giving demonstrations to the general counsel," she says.

And increasingly, she adds, IT staffers are being hired directly by the office of the general counsel. Why are lawyers suddenly becoming IT kingpins? Records management, Patterson contends. Highly regulated businesses, such as finance and insurance, or those prone to lawsuits, like manufacturing, see records management as essential to mitigating risk and fighting courtroom battles. And so the general counsel's office wants a direct say in choosing the company's archiving tools and is willing to go so far as to hire expertise to specify and even run the software for them, she says. That's certainly true in Massachusetts, which recommends that the "general counsel, CFO or higher ranking officer" become the records czar at state agencies. CIOs need not apply.

Patterson: Lawyers are becoming IT kingpins.

Middleware Takes Self-service Path

Hubspan Inc. in Seattle offers what Robert Pease, its vice president of marketing, calls "cloud-based messaging between partners." Essentially, Hubspan provides the connectors between applications and data sources so your supply chain can connect with your operations. For example, using Hubspan, your product buyers can look into a supplier's inventory to see what's on hand, cut an invoice and watch the inventory levels adjust accordingly. Cool. But even better, you don't have to handle all the gunky middleware plumbing. Leave that to Hubspan. Later this year, Pease says, the company will begin to experiment with self-service. Today, Hubspan experts need to work with you to map the connections between your apps and those you want to connect with. The plan is to eventually let you do the mapping yourself. Pease argues that the 9,000-plus application-to-application connections Hubspan has created so far give it more integration experience than your staff has, while making things simple enough for you to do the work yourself. Self-service pricing has not been set.

16.4%
Growth of middleware market in 2006, says Gartner.

Plug Wireless Security Holes

Let's face it: Every new technology added to your network is another vector for security problems. Mike Lloyd, chief scientist at RedSeal Systems Inc. in Redwood City, Calif., says virtually all the tools you've given end users, such as e-mail, the Web and instant messaging, "are steppingstones to your network that attackers use to get to important data." If you don't know where the vulnerabilities in those tools lie, your critical information is at risk, he suggests. Last week, Red Seal unveiled its Security Risk Management (SRM) 2.1 software with support for wireless networks. Lloyd says that Version 2.1 "shows a map of those [wireless] steppingstones" to your critical data. Even if you encrypt your wireless communications, he says, those pathways from wireless access points to other network devices are available to a skilled intruder. The next attack vector RedSeal will, um, attack is virtual machine software, specifically vulnerabilities in VMware Inc.'s hypervisor. Look for that later this year. Subscription pricing for SRM 2.1 starts at $1,000 per month, or you can pay $25,000 for a perpetual license. ■

Lloyd: Know what paths attackers can take to your data.

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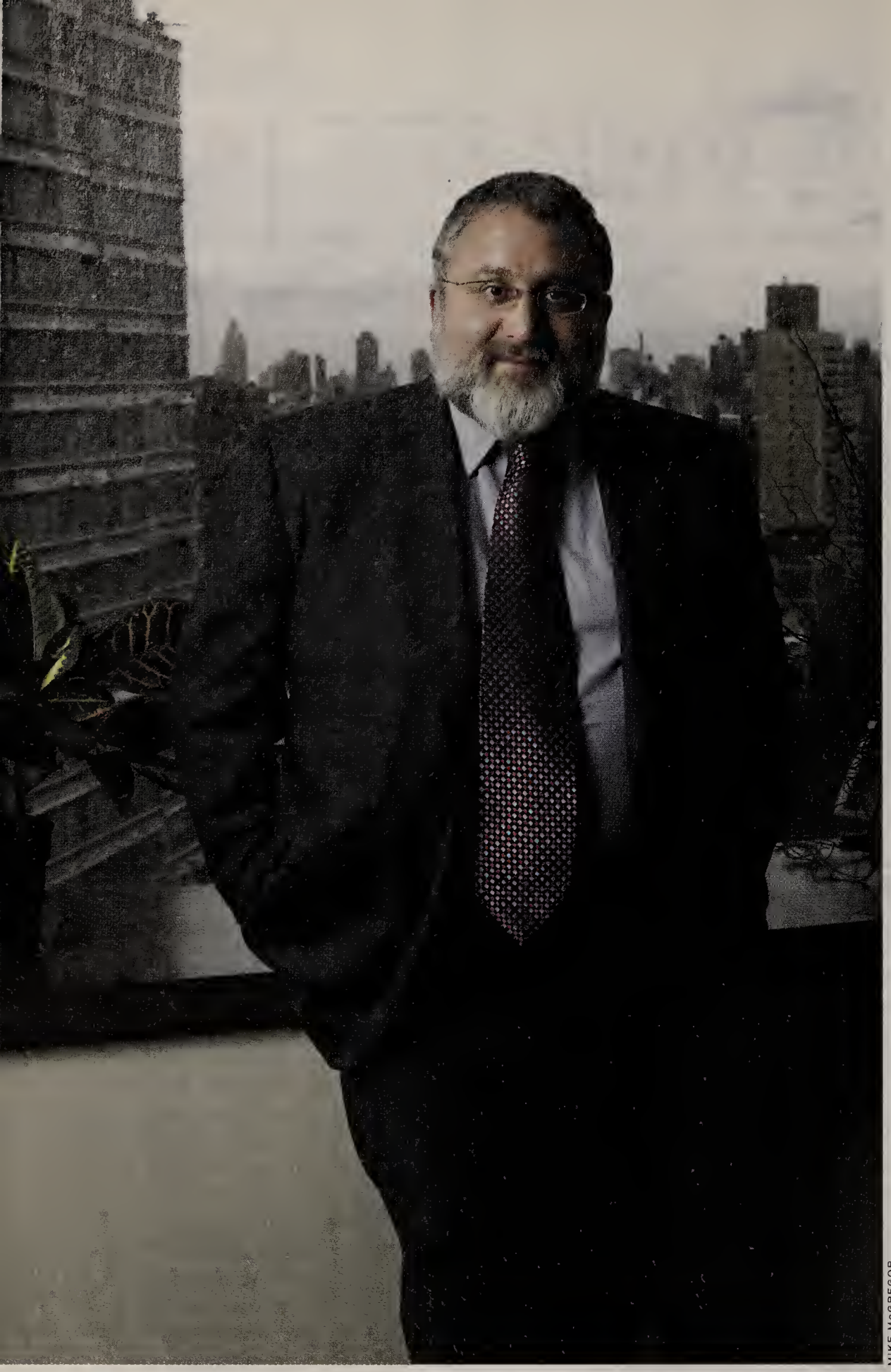

MIKE McGREGOR

Dossier

Name: Eben Moglen

Title: Founder, president and executive director

Organization: Software Freedom Law Center

Location: New York

Book most recently read: *History of the Conquest of Mexico*, by W.H. Prescott

Favorite film: *Much Ado About Nothing*

Favorite food: "I cook lots of different things. In my kitchen, there's Chinese food, there's Indian food, there's Italian food. "

Favorite vacation spot: "My view about vacation is that the great luxury is getting off the Net. I have to have a week or two in which I am unattached."

What he collects: "I collect books – heaps of them. And I seem to be a collector of computer hardware, but that's only because we have such a crappy recycling structure."

Favorite music: European and Northern Indian classical music, and American jazz

THE GRILL

Eben Moglen

The founder of the Software Freedom Law Center talks about taking on Microsoft and Disney, managing the software commons and 'copyleft capitalism.'

What do you see as the biggest danger to open-source software today? On the one hand, there's still a locus of resistance. Microsoft still maintains strongly the view that its business model, which depends upon concealing source code from users, is a viable and important and indeed necessary model. And so as long as a company that sells a billion dollars a week in software is in that sense fundamentally still trying to [fight] the free way of doing things, Microsoft remains a very dangerous party.

But Microsoft, too, has now fundamentally recognized that there is not another generation left in the proprietary software idea, and they are trying to leverage the remaining value of their monopoly in a world of mixed free and unfree code. As Microsoft begins to move itself away from being the primary partisan of unfreedom, the second

Continued on page 20

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“One of the things that everybody now understands is that you can treat software as a renewable natural resource – like forest products or fish in the sea.

Continued from page 18

most important partisans of unfreedom are the owners of culture — the Disneys and the other major movie studios, who have a great deal of image-making authority in the world and a great deal to lose from the obliteration of their distribution mechanisms.

Proprietary software companies may not want to hear about such radical ideas that could put them out of business. How do you make anybody listen? Possibly the difficulty you are having is too quick a diagnosis about what businesses need. The fundamental theory that I believe has to do with the benefits of what I think of as “copyleft capitalism” [the idea of making a program or other piece of work freely distributable, as opposed to restricting its use via a copyright].

The primary desire that businesses have is for control over their own destinies, for avoidance of autonomy bottlenecks which put the fate of their business into the hands of someone else. The difficulty that they experience — that they call vendor lock-in, or noninteroperability — is a difficulty which is really a businessman’s equivalent of [Free Software Foundation President Richard] Stallman’s frustration at unfreedom. They are essentially the same recognition: In a world of complex, interdependent technology, if I don’t control my technology, it will control me. Stallman’s understanding of that proposition and Goldman Sachs’ understanding [for example] needn’t be as far apart as one might think. The desire to maintain autonomy — the desire to avoid control of destiny by outside parties — is as fierce in both cases as it can get.

The near death of IBM in the 1980s gave that organization a clear understanding of how to avoid having its destiny controlled by somebody who made software. And as you look at the ripples of this idea through the economy, you begin to understand why lots of people are going to take up this call.

Each [IT vendor] is left in a different place because they are different entities. One of the things that everybody now understands is that you can treat software as a renewable natural resource — like forest products or fish in the sea. If you build community, if you make broadly accessible the ability to create, then you can use your limited resources not on the creation or maintenance of anything, but on the editing of that which is already created elsewhere.

So you’re saying that open source is basically changing the attitudes of traditional companies? All of these companies are coming to depend heavily in profit-making business on nonprofit supply chain [the open-source software they are using]. They are each discovering that there are nonprofit supply-chain elements which are crucial to profit-making success. Now, in 20th century economic organizations, if you had discovered at General Motors that 30% of the value of each of your cars was coming from a nonprofit down the street, you’d have gone and bought the nonprofit. [But] because of GPL and the copyleft, a large portion of that nonprofit supply chain is unpurchaseable. You can’t own it. It was designed to be a commons.

If you’ve become dependent on a commons for whatever role in your business, then what you need is commons management. You don’t strip-mine the forest; you don’t fish every fish out of the sea. And, in particular, you become interested in conservation and equality. You want the fish to remain in the sea, and you don’t want anybody else overfishing. So you get interested in how the fisheries are protected.

I train forest rangers to work in a forest that some people love because it’s free and other people love because it produces great trees cheaply. But both sides want the forest to exist pristine and undesecrated by greedy behavior by anybody else. Nobody wants to see the thing burn down for one group’s profit. Everybody needs it.

So whether you are IBM, which has one strategy about the commoditization of software, or Hewlett-Packard, which has another — whatever your particular relationship to that reality is — everybody’s beginning to get it. In the 21st century economy, it isn’t factories and it isn’t people that make things. It’s communities.

Is Microsoft and its occasional patent threats to Linux something that keeps you awake at night? I have spent more time studying that problem than Microsoft has spent creating that problem. It doesn’t keep me awake at night, but it keeps me at work during the day. If in the process of irreversible change, Microsoft launches its missiles — which other dying empires, like the Soviet Union, have managed not to do — we will protect our clients. If they die without launching their missiles, it will be better for everyone.

Do you personally use much proprietary software today? No, none. I have never been a Windows user. I have never used the Macintosh OS.

— *Interview by* **Todd R. Weiss**

LEXUS HAS ONLY ONE PLANT OUTSIDE JAPAN.

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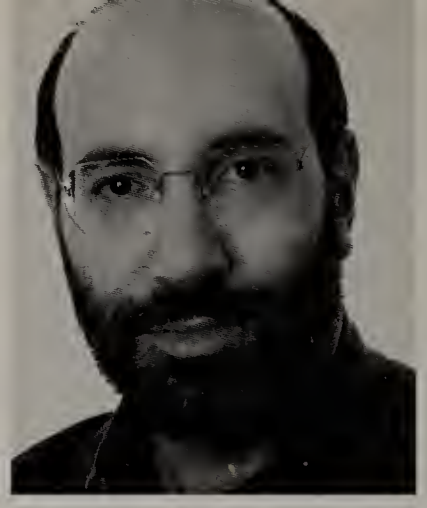
OPINION

Michael Gartenberg

Google's Android Is An Audacious Move



WHILE SOME had expected Google to come out with an iPhone-killing G-Phone, the company's announcement in November of the Android mobile platform is something far more sweeping, and it has ramifications for IT.

To show that Android is no pipe dream, Google trotted out scores of partners in the initiative, including handset vendors, carriers and software providers. What's most interesting is that the Linux-based platform will be open source (under the Apache license) and free of charge.

So, why is Google doing this? It aspires to get its applications into the mobile sphere, but right now there's just too much platform fragmentation. Even Java on one handset is not like Java on another. Lacking a single, strong platform to build on, Google wants to create one. That's why it isn't coming out with its own hardware or tying Android to one carrier.

The cost of Android (there is none!) is going to make it attractive to both handset vendors and carriers. And there are no strings attached other than a very important agreement not to fragment the platform. Google will offer a suite of mobile applications for Android, but it won't require that the apps be used. In theory, you could see Android handsets with Yahoo Mail and Live Search, but no Google services at all.

If Google delivers on its vision, the impact to consumers could be huge. The mass market is finally embracing more functionality in mobile devices, but at the same time, carriers and handset vendors are looking to cut costs. Android might bridge that gap. And Google has the corporate heft to prevent the market from fragmenting, so it could succeed where other Linux implementations have failed.

Is Google's entry into the mobile market a smart move? Yes. It's as if IBM had offered Linux to PC vendors for free at the time Microsoft introduced Windows NT.

Is Google making a smart move? To answer that, consider a bit of alternative history. Suppose that Linux had been available at the time that Microsoft came out with Windows NT. Now suppose that IBM decided to offer Linux for free to PC vendors along with a core suite of applications. How different would the PC business be today? Oh, and there are a lot more phones out there than there are PCs.

But, of course, business users are not consumers, and corporate IT will have a different take on Android. Google will need to articulate why business users should embrace this platform.

At the moment, a lot is missing for business deployment. There was no announcement that Android would support Exchange synchronization, be compatible with Office applications or allow central device management. Google's mobile competitors already have solutions for these things that work well. Enterprise developers will want to keep an eye on Android, but it's not something they'll embrace in the short term.

Still, IT cannot ignore last year's big developments in the mobile market. A year ago, neither Google nor Apple was a player, and today they are two of the most relevant and talked-about companies in the mobile world. Things are moving fast, and IT has to pay attention as the combatants fire one salvo after another. ■

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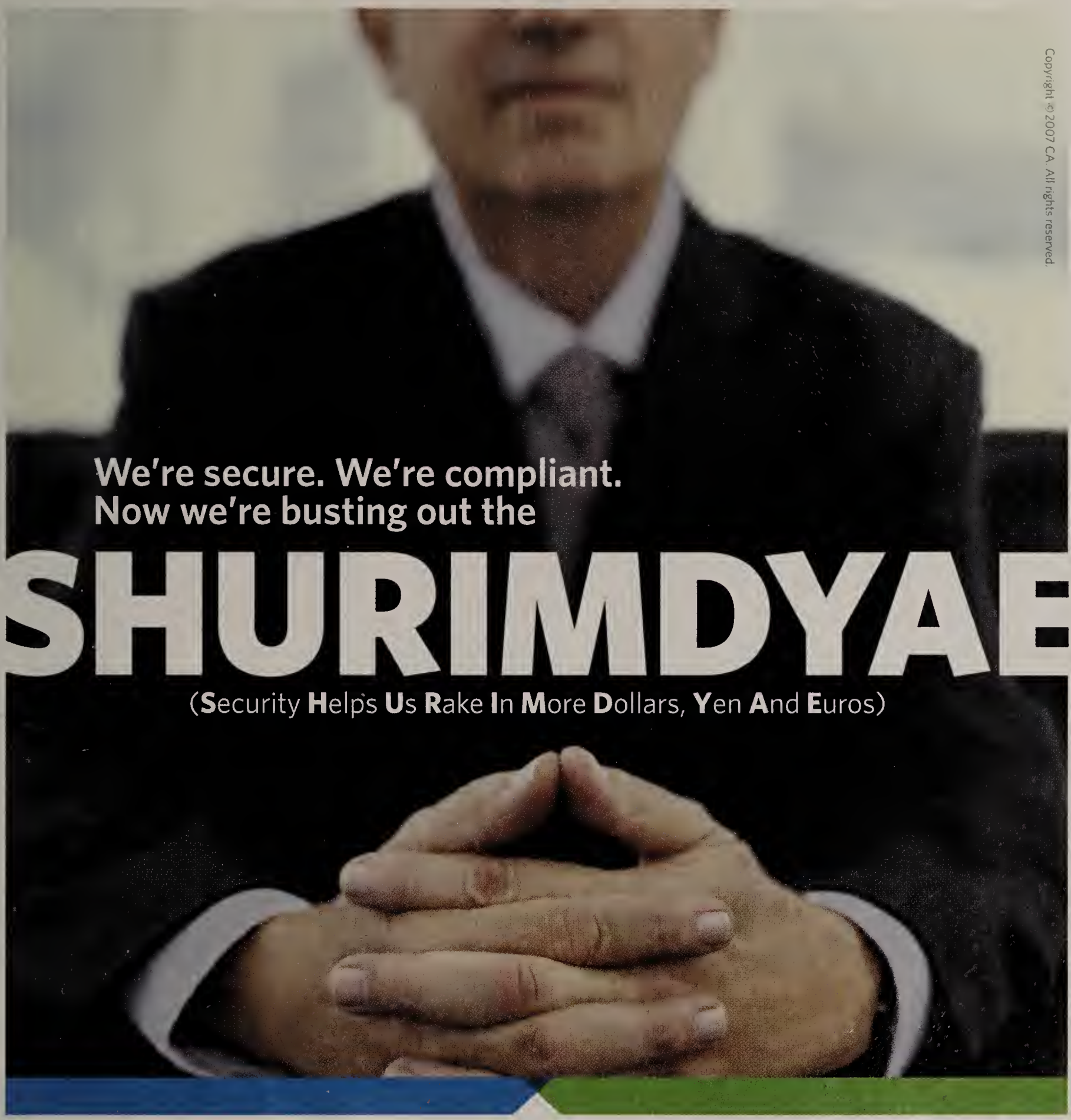

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Apocalypse Soon

If the Internet goes dov

It's likely that the Internet will soon experience a catastrophic failure, a multi-day outage that will cost the U.S. economy billions of dollars.

Or maybe it isn't likely.

In any case, companies are not prepared for such a possibility.

But then again, some are.

These mixed messages come from credible sources. The confusion stems in part from the fact that the Internet has never seen anything much worse than local outages and brief slowdowns. But could it? And if it did, how ready would your company be?

Indeed, the threat is "urgent and real," says The Business Roundtable, an association of CEOs of large U.S. companies. The Washington-based public policy advocacy group says there is a 10% to 20% chance of a "breakdown of the critical information infrastructure" in the next 10 years, brought on by "malicious code, coding error, natural disasters, [or] attacks by terrorists and other adversaries."

An Internet meltdown would result in reduced productivity and profits, falling stock prices, erosion of consumer spending and potentially a liquidity crisis, according to a recent Business Roundtable report, "Growing Business Dependence on the Internet — New Risks Require CEO Action." The organization based its conclusions on earlier risk analyses done by the World Economic Forum in Geneva.

Tom Lehner, director of public policy at The Business Roundtable, says business executives often fail to realize how dependent they have become on the public network — for e-mail, collaboration, e-commerce, public-facing and internal Web sites, and information retrieval by employees. He also notes that disaster recovery and business-continuity plans often fail to take into account the threat an Internet disruption poses to a company and its suppliers. Moreover, business executives often mistakenly believe that government will take the lead in restoring network services in the face of an Internet failure, according to Lehner.

"What we wanted to do in this report is say to CEOs, 'You may not realize that whole segments of your business are almost completely dependent on the Internet, and it's not enough to have a few IT specialists to help you respond to problems as they come up,' " Lehner says.

JUDGING THE RISK

Stephen Crocker, an Internet pioneer and chairman of the Security and Stability Advisory Council of the Internet Corporation for Assigned Names and Numbers (ICANN), says he tries to walk a line between "Chicken Little, things-are-terrible" scenarios and "Pollyanna, the-world-is-wonderful" views of the Internet. He says, for example, that he worries little about a physical attack on the Internet — against major hubs, lines and so on. "I don't know of any physical attack that would have any widespread or long-lasting effect," he says. "The Internet is pretty robust at the physical layer. There are just too many alternate paths available."

But the Internet is not so robust at other layers, admits Crocker, the CEO of Shinkuro Inc., a Bethesda, Md.-based developer of information-sharing technology. He points to the possibility of "systematic failure of operating systems like Windows, or penetration by worms that run rampant and cause massive amounts of chaos," or floodlike denial-of-service attacks. Still, he says, these kinds of disruptions, although annoying and potentially quite costly, are typically resolved in a matter of hours and thus stop short of being the kind of catastrophe that the Business Roundtable report contemplates.

Others agree that the risk of catastrophe is minimal. Asked if he worries about an Internet meltdown, Michael Long, senior vice president of global services at Siemens Medical Solutions, says, "Anything is possible, certainly, with things today like the terrorism situation. But we are pretty confident that if we did have an Internet hiccup, we'd go with alternate communication paths."

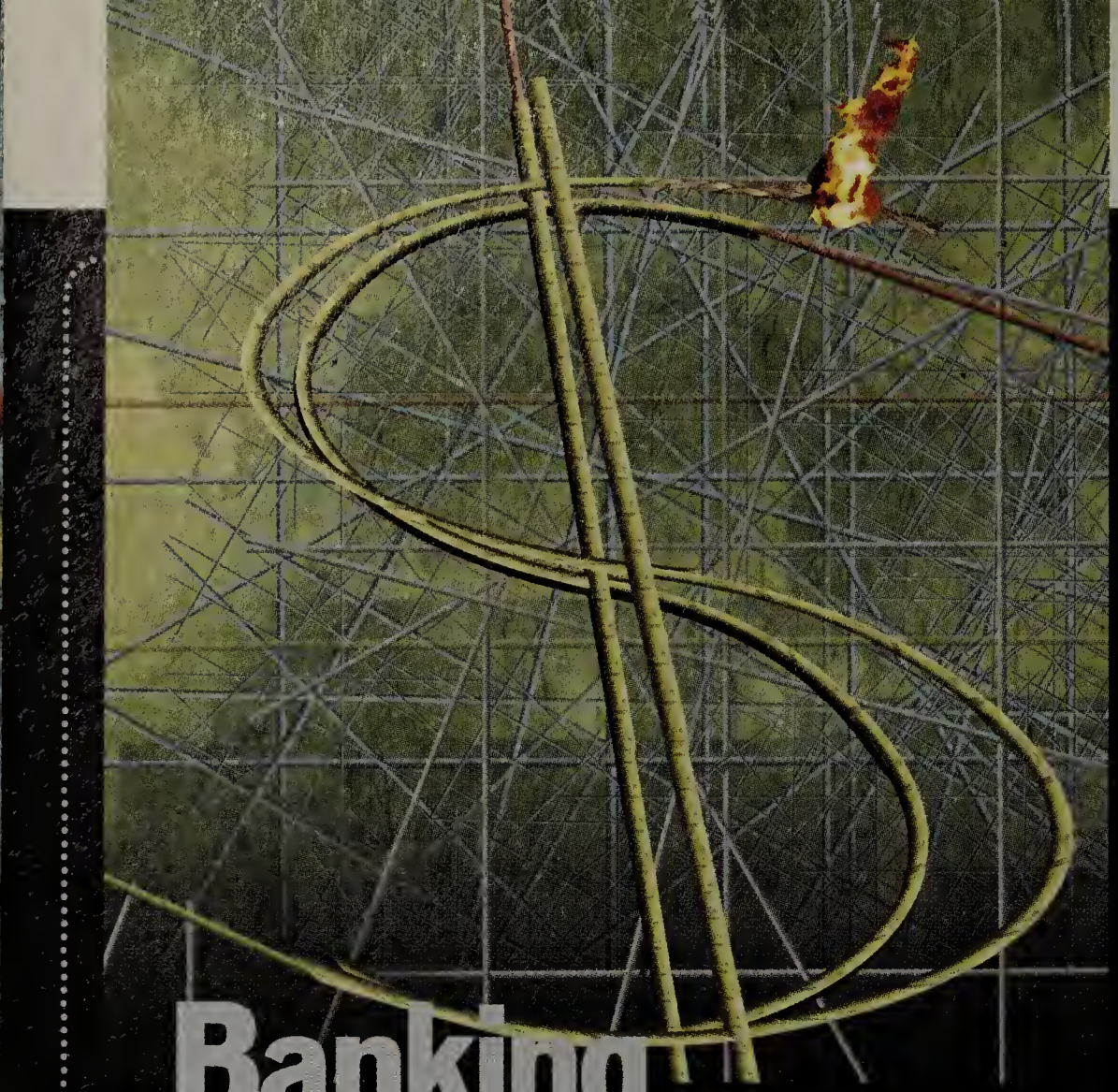
In fact, he says, he views the Internet as something of a backup for his dedicated lines from AT&T Inc. and Verizon Communications Inc.

Malvern, Pa.-based Siemens Medical Solutions provides application hosting for more than 1,000 health care customers at 600 sites, mostly through private, dedicated lines.

ILLUSTRATIONS BY MICHAEL MORGENSTERN

...n, will you be ready

By Gary Anthes



Banking on the Internet

The financial services industry is split on just how big a deal an Internet crash would be.

"THE BANKING and financial sector is in good shape for [Internet] disruptions, as they have regulatory requirements that force them to be prepared, and they can justify the expense of preparedness," says Patrick Cain, chairman of a network security working group of the Internet Engineering Task Force. "Additionally, many interbank financial networks do not operate over the vanilla Internet, so they are a little more insulated from general Internet problems."

But other IT professionals are less sanguine. "The financial industry is worried about the possibility of a widespread or prolonged Internet outage," says Dan Schutzer, executive director of the Financial Services Technology Consortium in New York. "We already have some facility to work despite [an] outage, but we are also continually looking at what more we can do."

Schutzer says the industry got a "rude awakening" on 9/11, when it learned it didn't have the communications diversity and redundancy that it thought it did. As a result, many financial companies have taken these steps to protect themselves against another Internet outage:

- Set up dedicated networks independent of telephone companies in certain parts of the country. "They are survivable communications owned and operated by financial service utilities," Schutzer says, declining to give details.
- Negotiated more aggressively with communications companies to guarantee diverse routing.
- Separated data centers and communications centers more widely geographically.

But concerns about reliance on the Internet extend beyond direct threats to the Net itself, Schutzer says. And some of the more mundane possibilities could turn out to be the most troublesome. For example, he says that in a flu pandemic, large numbers of employees may be forced to work at home via VPNs on the Internet. "What happens to the available bandwidth," Schutzer asks, "if these employees are competing with kids uploading MP3 files?"

– GARY ANTHES

Long does concede that certain functions would be a "challenge" without the Internet.

For example, Siemens uses the Internet extensively for troubleshooting and remote diagnostics by its major IT vendors, IBM, Hewlett-Packard Co. and Cisco Systems Inc. Also, the company receives 1 million e-mail messages a week via the Internet, he says.

There is a good chance that parts of the Internet will fail from time to time, says Neal Puff, CIO of Yuma County, Ariz. "But having been based on the Arpanet and designed to keep functioning when pieces are broken, it seems less likely that the entire Internet would stop working."

The county currently accesses its ERP applications via a virtual private network over the Internet, and it offers many Web services to citizens from its own data center, also via the Internet. But Puff says that because of reliability concerns, he wants to flip that around, offering externally facing services from a distant site and hosting applications for internal use in his own data center.

Puff says it is less likely that the Internet would be disrupted at a hosting company in a big metropolitan area that has a robust infrastructure and a lot of redundancy than it would be in sparsely populated Yuma County. Conversely, internal users are less likely to lose the use of their corporate applications if those applications reside in the data center and don't depend on the Internet.

These moves will offer some protection against network outages, but not 100% protection, Puff acknowledges. "If the entire Internet goes down, everyone's in a world of hurt, but I try to look at the probabilities."

BURNED BRIDGES

BNSF Railway Co. in Fort Worth, Texas, also uses a private, non-Internet network for its core operations and for transactions with major customers. But it uses the Internet for many less-critical functions that would be painful to lose if the Internet went down, says Beth Bonjour, assistant vice president for technology.

For example, BNSF uses the Internet

Continued on page 28

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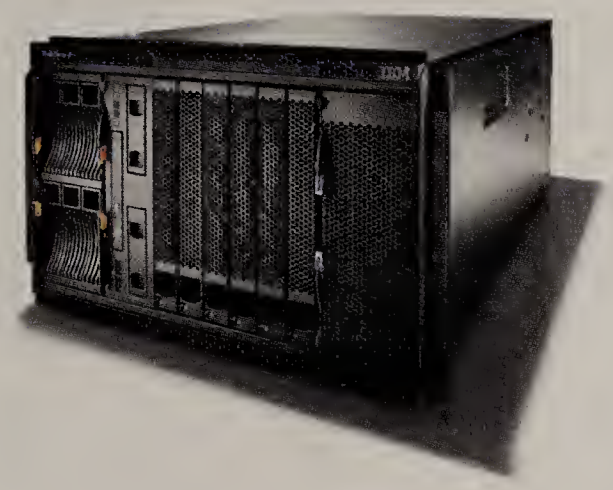

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Continued from page 26

for its customer help desk and to provide shipment-tracking information to smaller customers. Offering customers self-help via Web sites allowed BNSF to reduce its support staff, but now the railway doesn't have adequate staffing to handle the fax, telephone and other means of communication that it would be necessary to use if the Internet went down. There have been some limited Internet outages, Bonjour says, "and it's not pretty."

INCONVENIENT AT BEST

Similarly, Intermountain Health Care Inc. in Salt Lake City uses a dedicated WAN to communicate with its major hospitals and clinics, but it uses the Internet for many other things, such as contact with vendors and health plan brokers and for access to WebMD, an online source of health advice. There are backups for some of those things. For example, ordinary telephone service can be used to communicate with vendors. But for others, such as broker relations, there is no backup. "It would be encumbered tremendously if the Internet went down," says Marc Probst, CIO at Intermountain.

Asked in a telephone interview if Internet alternatives are part of Intermountain's disaster recovery and business-continuity plans, Probst says, "We haven't sat down and gone through that kind of thinking. It's probably a very good thing to do, and we will, right after this phone call."

ICANN's Crocker says that although the Internet has serious vulnerabilities, some of them could be patched relatively easily. He urges IT and business leaders to speak up and demand better technology. "Today, the network operators, equipment vendors, government and business all seem to accept the idea the network is inherently dangerous and can't be modified in any useful way. I think that's fundamentally wrong."

He points to a number of practical proposals for Internet improvements that have gone nowhere, including Internet Best Current Practice 38 (see story at left).

Crocker says the Business Roundtable report and similar critiques carry an "implied assumption" that individual companies can protect themselves. There is some truth to that, he says, because companies can, for example, get multiple copies of critical systems running in different locations, albeit at considerable expense.

But he says that the most important thing companies should do is to band together to improve the overall situation. A "first-class" CIO, Crocker says, should approach his CEO with this message: "Boss, we need to take care of ourselves, but we also need to organize into a powerful user group and bring some pressure on [vendors] so that the network is fundamentally safer tomorrow than it is today." ■

The Little Things Count

PATRICK CAIN, chairman of a network security working group of the Internet Engineering Task Force, says he finds the possibility of a catastrophic Internet failure unlikely. He points out that a major earthquake in Japan in 2005 slowed traffic in and out of Japan but went largely undetected in the rest of the world. When hurricanes disrupt traffic along the East Coast of the U.S., traffic is seamlessly routed to the West Coast. And when a domain name server goes down, an alternate server picks up the traffic.

But, says Cain, co-founder of The Cooper Cain Group Inc. in Cambridge, Mass., it's natural for people planning for disasters to concentrate on the big, dramatic events, like the crash of an airliner into a data center. Meanwhile, lesser but more likely events are ignored. For example, he says, if an organization has some local problem that prevents access by the public to its Web site, that can create a public relations disaster.

"So if you are on the West Coast, maybe you should get a cheap Web host on the East Coast set up as a fail-over site," he says. "But very few companies do that."

– GARY ANTHES

Best Practice Not Practiced

IN MAY 2000, in response to a "resurgence in denial-of-service attacks" against Internet targets, the Network Working Group of the Internet Engineering Task Force issued a request for comments (RFC), titled "Network Ingress Filtering: Defeating Denial-of-Service Attacks Which Employ IP Source Address Spoofing."

Behind the complicated title lay a simple idea. A lot of mischief on the Internet, including denial-of-service attacks that flood Web sites, rely on randomly changing forged source addresses. That is, the offending data packets do not contain the real "return address" of the computer that sent them. But through a simple process called network-ingress filtering, Internet service providers could check packets to ensure that they contain valid, legitimately reachable source addresses, says the RFC, which has since been named Best Current Practice 38 (*www.armware.dk/RFC/bcp/bcp38.html*).

"To what extent have the ISPs implemented that?" asks Steve Crocker, chairman of ICANN's Security and Stability Advisory Council. "The answer is, hardly at all. They said, 'It's expensive, and besides, no one is forcing it on us.' This is something that can and should be done to improve the overall security of the Internet, but it doesn't fit the model of how someone can make more money by selling a new product."

– GARY ANTHES

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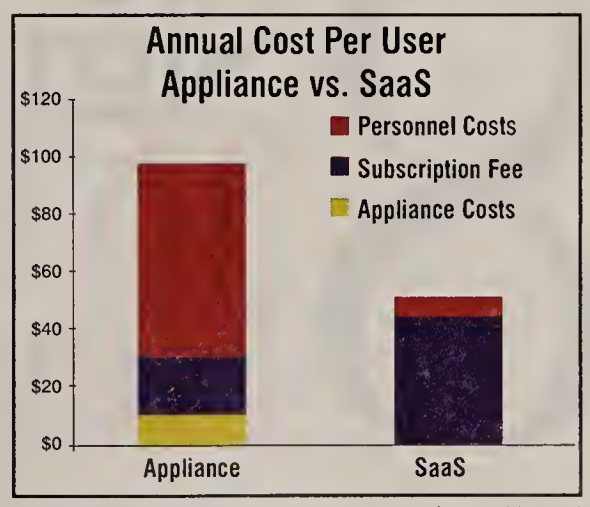

Sources: Software & Information Industry Association 2006, and Gartner 2007. For specific details, visit www.webroot.com/saas.

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8 Signs It's Time To Look for a New Job in '08

Don't be the last to realize you ought to move on.

By Thomas Hoffman

SHORT OF being handed your walking papers, there are often telltale signs that it's time to look for a new job: You haven't been promoted since the Clinton administration. The most exciting assignments are routinely handed to your peers or underlings. Your desk keeps moving farther and farther from where the action is.

But some indicators are less obvious, such as subtle shifts in an IT organization's structure that can result in career stagnation. A variety of career experts, headhunters, recruiters, CIOs and IT staffers gave us their takes on when it's time to move on.

1 YOUR ROLE HAS BECOME MARGINALIZED. If you're being bypassed for promotions or interesting assignments, or they're consistently being offered instead to IT workers in subordinate positions, "that would be an obvious sign," says Robert Rosen, CIO at the National Institute of Arthritis and Musculoskeletal and Skin Diseases in Bethesda, Md., and past president of Share, an IBM user group in Chicago.

Often, the handwriting is on the wall. You just need to stop, step back and read it. "If you feel like you're no longer contributing, there's a good chance you may not be," says Frank Hood, CIO at QIP Holder LLC (Quiznos) in Denver.

2 YOU'VE STOPPED GROWING. "If you're not learning every day, if you're not doing new things, and if you're not improving," it's time to move

> **If you hate what you're doing or you're not proud of what you're doing, or there's an issue you need to talk to your boss about but you don't because you know it won't do any good – that's when it's time to look for a new job.**
>
> **JOEL REITER,** APPLICATION ANALYST, U.S. BANCORP

on, says Sara Garrison, senior vice president of product and solutions development at Sabre Holdings Corp. in Southlake, Texas.

Red lights should be flashing if you've effectively been in the same role for two or three years and haven't taken on any significant new challenges during that time frame, says Umesh Ramakrishnan, vice chairman of CTPartners, an executive recruiting firm in New York.

3 YOU'RE NOT PART OF THE BIG PICTURE. Most CIOs assemble a road map of where they intend to take their organizations over the next 12 to 60 months, including the top IT-business projects they plan to work on, notes Joe Trentacosta, CIO at Southern Maryland Electric Cooperative in Hughesville, Md. If there are a lot of upcoming projects that don't include your area of expertise or in which you may play a minor role at best, "that's a warning sign," he says.

Further, if you've been relegated to a commodity-type IT function that offers little value to the organization or can easily be outsourced, "it's time to move on to a new opportunity," says Hans Keller, chief technology officer at the National Aquarium in Baltimore.

4 YOU'VE BEEN EXCLUDED. If you're a CIO or other senior IT manager, the alarms can include your not being asked to participate in new business decisions or being excluded from formal or informal executive committee meetings, says Craig Urrizola, CIO at Saladinos Inc. in Fresno, Calif. The view is equally bleak if you're an IT staffer whose input on new projects is no longer requested or is sought on just a limited basis.

5 YOUR LEVEL OF INFLUENCE IS WANING. A CIO certainly has more clout within an organization than a network engineer. But all IT professionals possess some level of influence within their work teams or at least among their own peer groups. If you see your powers of persuasion shrinking, Keller suggests that it's time to move on.

6 YOU NO LONGER ENJOY THE WORK. "Someone once told me that we're not here for a long time; we're here for a good time," says Michael Nieset, managing partner for the technology practice at Heidrick & Struggles International Inc. in Cleveland. "If you're not excited about the projects you're working on, fix it," he says. "If you are wholly engaged, passionate about what you're doing and doing what you're good at, you'll be fulfilled and rewarded accordingly. Sometimes people stay in suboptimal situations because it's comfortable for them. You have to take control."

7 CONTINUOUS IMPROVEMENT ISN'T PART OF THE MANTRA. Sometimes, there are organizational changes — or lack thereof — that you should regard as career alerts. These include stagnation within a corporation or an IT department. If your IT organization has been using the same application development techniques for the past 15 years and has made no effort to update its approach, "then something's wrong," says David Van De Voort, a principal consultant in Mercer LLC's Chicago office.

If your company is unwilling to invest in continuous improvement processes such as CMMI, ITIL or Six Sigma, it may be time to seek a company that is, he adds.

8 OTHER PASTURES TRULY ARE GREENER. If you've reached a crossroads where you've become disenchanted with your employer for one reason or another (i.e., long hours, infrequent promotions, career malaise) and you've received a job offer from another company, it may be the right time to jump ship.

"In situations where things don't fix themselves — if you hate what you're doing or you're not proud of what you're doing, or there's an issue you need to talk to your boss about but you don't because you know it won't do any good — that's when it's time to look for a new job," says Joel Reiter, an application analyst at U.S. Bancorp in St. Paul, Minn.

In this situation, however, be certain that you're moving toward a good opportunity and not just moving away from one that's gone bad. ■

When to Stay Put

Would-be job hoppers who are unsure whether it's the right time to jump would be well advised to take a line from Kenny Rogers' "The Gambler": You got to know when to hold 'em; know when to fold 'em.

Here are some concrete tips from career experts on when it's best to stay in your current role:

- If you are consistently receiving new and challenging assignments and/or promotions.
- If you are asked or encouraged by your employer to take on additional training to help expand your skills.
- If you are offered incentives and rewards for coming up with new ideas that help the organization.
- If your compensation is equivalent to or growing at a rate that's comparable to that of your peers in like-sized companies or similar industries.
- If your company has been on a strong and steady growth path – and that is reflected in your compensation.
- If your supervisor provides you with clearly defined career opportunities.
- If your organization has high-quality management and mentoring.

– THOMAS HOFFMAN

NOT SO FAST! Don't quit your job until you've considered how to land a new one. For help, read **"8 Ways to Land a Job in '08"** on **page 32.**

DMITRY KOKSHAROV © FOTOLIA

8 Ways to Land a Job in '08

Here's how to get noticed and nail the interview.

By Thomas Hoffman

SURE, demand for IT labor in the U.S. is strong across nearly all industries and government sectors. But having a technical certification or work experience won't guarantee an interview, let alone a job offer.

Here are some tips from IT labor experts, recruiters, executives and workers on how to get the position you want in the new year.

1 APPEAR EMPLOYABLE. If you're currently unemployed, find a temporary position or work as a contractor, says Joel Reiter, an application analyst at U.S. Bancorp in St. Paul, Minn. That shows flexibility and ambition.

2 KEEP LEARNING. "Education is absolutely vital to further your career in IT," says Neill Hopkins, vice president of skills development at The Computing Technology Industry Association Inc.

Employers look for a demonstrated thirst for knowledge and a willingness to learn new skills, so step out of your comfort zone and learn new technologies or take an evening class. "It shows that [you're] willing to be aggressive and to learn," says Joe Trentacosta, CIO at Southern Maryland Electric Cooperative.

3 WORK YOUR RELATIONSHIPS. Savvy job candidates use social networks like LinkedIn and Facebook for inside word on jobs from college alumni, former business associates and mentors, says Dan Reynolds, CEO of The Brokers Group LLC, a staffing firm in Princeton, N.J.

And if you're a newbie, you can connect with potential employers through entry-level job listings on social networks, says Michael Nieset, managing partner at Heidrick & Struggles International Inc.'s technology practice in Cleveland.

4 DOT YOUR i's. Make sure your résumé uses clear, proper English and correct spelling. If it's sloppy, "you won't even make it past the first gate," says Robert Rosen, immediate past president of IBM user group Share and CIO at the National Institute of Arthritis and Musculoskeletal and Skin Diseases.

5 STRUT YOUR STUFF. "Employers want to see 'I managed this, I coordinated that,' " says Reynolds. "They don't want to see 'assisted with this' or 'supported that.' "

If you weren't the project leader, highlight your role in the success of a critical project, says Katherine Spencer Lee, executive director at Robert Half Technology in Menlo Park, Calif.

6 COME PREPARED FOR THE INTERVIEW. This sounds like a no-brainer, but hiring managers are increasingly looking for candidates who can do more than a "tech interview." They may check your communication skills by asking you to explain your past experiences or describe how you would handle certain situations on the job, says Jill Herrin, CEO of JDResources Inc., a recruiter in Memphis.

7 TALK BUSINESS. Prospective employers also want to know whether you understand how systems and applications affect various business divisions and the company overall. "We want somebody with technical acumen, but I would like to know that these people know the basis for making money," says Frank Hood, CIO at QIP Holder LLC (Quiznos) in Denver.

8 GET A FOOT IN THE DOOR. Don't hesitate to take a temporary, contract or temp-to-hire position. "Once you come in as a temp or a contractor, no one is really looking at your résumé," says Reiter. "They're looking at whether you can or can't do a particular job." ■

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3. Fight magic with magic.
With a wand of your own—say a pointer—you can create some magic of your own. Before you know it, you'll be turning Witches into toads.

4. Insult the Witch.
Witches, despite their warty exteriors, are quite sensitive. So asking "Hey, Witch—is that your nose or a green banana?" can be devastating.

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Books That Can Change Your Life

Must-reads for 2008. By Mary K. Pratt

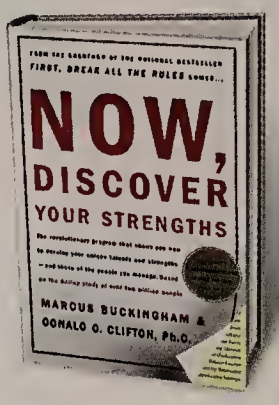
ANDREW GALBUS was a programmer/analyst at a food manufacturing company in the mid-1990s when he read Edward Yourdon's **Decline and Fall of the American Programmer.** Galbus says the book made him realize that his employer was not helping him build a sustainable career in the IT sector. "It made me think, 'Do I want a job or a career, and do I want just a career in a company or a career in the IT industry?' " Galbus says.

Spurred by the book's message, Galbus got a job at an organization that helped its people build their careers. He also got an MBA. He's now unit manager of the IT Quality Office at the Mayo Clinic in Rochester, Minn.

Books can educate, provide insight, prompt reflection and even inspire change. We asked corporate coaches, leadership consultants and IT professionals for their top picks:

PERFORMANCE

■ **Now, Discover Your Strengths** (Free Press, 2001), by Marcus Buckingham and Donald O. Clifton, and **Go Put Your Strengths to Work: Six Powerful Steps to Achieve Outstanding Performance** (Free Press, 2007), by Marcus Buckingham. "They give you a system for actually identifying and putting language to your strengths," says Wendy Wallbridge, president and executive coach at On Your Mark Corporate Coaching & Consulting Inc. in Novato, Calif.



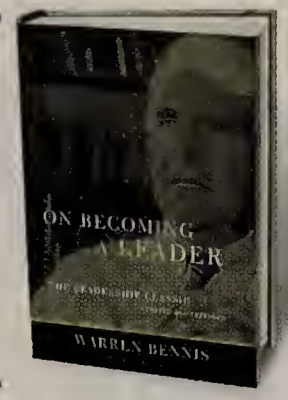
■ **Death by Meeting: A Leadership Fable . . . About Solving the Most Painful Problem in Business** (Jossey-Bass, 2004) and **The Five Temptations of a CEO: A Leadership Fable** (Jossey-Bass, 1998), by Patrick M. Lencioni. "The stories are very real, and the way he approaches things makes it very memorable," says Bart Bolton, a leadership consultant at Lifetime Learning in Upton, Mass.

■ **The Nibble Theory and the Kernel of Power: A Book About Leadership, Self-Empowerment and Personal Growth** (Paulist Press, 2004), by Kaleel Jamison. "This was a real eye-opener to me on how I needed to step back and think differently about what I was doing," says Catherine Brune, senior vice president and CIO at Allstate Insurance Co. in Northbrook, Ill.

■ **Improv Wisdom: Don't Prepare, Just Show Up** (Harmony/Bell Tower, 2005), by Patricia Ryan Madson. "A refreshing view of communication

The bungee cord for the modern IT executive.

and behavior in work and personal life," says Robert Rouse, director of the Regional Leadership Forum of the Society for Information Management and a professor of computer science and engineering at Washington University in St. Louis.



> **"Someone who really wants to understand leadership should start here."**
>
> **BART BOLTON,**
> LEADERSHIP CONSULTANT, LIFETIME LEARNING

LEADERSHIP

■ **On Becoming a Leader: The Leadership Classic** (Basic Books, 2003), by Warren G. Bennis. "Someone who really wants to understand leadership should start here," says Bolton.

■ **Emotional Intelligence: Why It Can Matter More Than IQ** (Bantam Books, 2006) and **Primal Leadership: Learning to Lead With Emotional Intelligence** (Harvard Business School Press, 2002), by Daniel Goleman. "Good leaders need to understand people," Bolton says.

■ **Thin Book of Appreciative Inquiry** (Thin Book Publishing Co., 1998), by Sue Annis Hammond. "You have to have a culture of appreciation or people become demoralized," says Wallbridge.

■ **Force for Change: How Leadership Differs From Management** (Free Press, 1990) and ***Leading Change*** (Harvard Business School Press, 1996), by John P. Kotter; and **The Heart of Change: Real-Life Stories of How People Change Their Organizations** (Harvard Business School Press, 2002), by John P. Kotter and Dan S. Cohen. They help define the difference between managers and leaders, Bolton says, noting that you have to know when to be one, the other or both.

■ **South: The Story of Shackleton's Last Expedition, 1914-1917** (Birlinn Ltd., 2002), by Ernest Henry, Sir Shackleton. "It's an amazingly inspirational story on how to lead and ensure the success of your followers," says Dan Gingras, a partner in the New England practice of Tatum LLC, an Atlanta-based executive services and consulting firm.

■ **True North: Discover Your Authentic Leadership** (Jossey-Bass, 2007), by Bill George, Peter Sims and David Gergen, and **Authentic Leadership: Rediscovering the Secrets to Creating Lasting Value** (Jossey-Bass, 2004), by Bill George. According to Bolton, these books will help you find your own leadership style.

INSPIRATION

■ **Banker to the Poor: Micro-Lending and the Battle Against World Poverty** (PublicAffairs, 2003), by Muhammad Yunus. "The fact that this gentleman pulled off what he did in today's world is inspirational," says Michael J. Wehr, a health systems database analyst at Vanderbilt University Children's Hospital in Nashville. ■

***Pratt** is a Computerworld contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

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Planning a Recovery That Isn't a Disaster

Our **overwhelmed** security manager wants her **disaster recovery plan** to be more than an exercise in **filling in the blanks.**

Trouble Ticket

AT ISSUE: The disaster recovery plan isn't worth the paper it's printed on.

ACTION PLAN: Devise something of real value despite tight resources.

EVERY JANUARY, I have to update my agency's disaster recovery plan. The good news is that the state only requires me to fill in some forms. I could be done in half an hour. The bad news? Should one of the state's major cities ever be struck by terrorists, this so-called disaster recovery plan would leave us looking like FEMA after Hurricane Katrina hit.

I'm not the sort of person who's content to satisfy the minimum requirements when I know how inadequate they are. This year, I'm considering revamping the entire plan, including testing it and training people on it.

But I'm shaking my head while I write these words. If you've been reading this column lately, then you already know why. My state is experiencing a budget crisis, and I've been bemoaning my lack of resources, especially the time and staff I need to do everything that needs to get done. Do I really think I can throw another big project in on top of managing a network and all of our information security?

My problem is that I can't help but identify with those nameless FEMA employees I have conjured up in my imagination. There were probably plenty of them who knew that what the agency had down on paper and stored away in dusty binders was pretty much useless because it hadn't been tested. I don't want to think "I knew it would be this way" after the fact. Lives are at stake, and I can't live with the potential consequences.

That means doing something more than the minimum this year, even though I'll probably have to do it on my own time.

I can start by assessing what I know. It could be that I'm not informed about the state's readiness to respond to a catastrophe. After all, my agency provides social services, not public safety. If a city blows up, who cares if social services shut down? The top priorities would be saving lives, searching for victims, discovering what happened, apprehending perpetrators and calming the public. My agency isn't involved in any of that.

I want to do more than the minimum, even if I have to do it on my own time.

Still, the state is more than one city, and we can't let everyone else down. Basically, we need to try to ensure that we can continue to operate, even if our main facility is destroyed or simply inaccessible.

BABY STEPS

But first things first. As in any disaster recovery plan, employee safety is the No. 1 priority. At the very least, I can update the employee roster so that locating employees (or their next of kin) won't be difficult. Then I can update the evacuation plans and perhaps expand them. Anything I do here is going to be an improvement, since the current plan is the equivalent of a fire drill.

Next, I can turn my attention to our ability to set up temporary shop. The agency has four physical locations in the state: the primary and secondary hubs, and two small facilities. I can plan a live test to demonstrate cessation of operations in the primary hub and continuance of operations in the secondary site.

That's probably as far as I will get this year, but it's a start, and I can build on it next year.

But I won't get that far if I let my exhaustion get the better of me. I won't be able to complete the task ahead of me without inspiration. What's inspiring me, at least for now, is the thought that the fate of our states and our nation is in the hands of the likes of me. There are educated, bright and hardworking people out there working for the government — I've learned that in my time in the public sector. But many of them, like me, are completely overwhelmed with conflicting priorities that demand their attention. It is only because of their dedication and passion that anything meaningful gets done. I hope I can rise to that standard and come up with a disaster recovery plan worthy of the name. ■

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JOIN IN

To join the discussion about security, go to **computerworld.com/blogs/security**.

This week's journal is written by a real security manager, **"C.J. Kelly,"** *whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com.*

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OPINION

Paul M. Ingevaldson

Strategic IT Systems? There Are None

AT a recent IT conference in Edmonton, Alberta, I had the opportunity to be on a luncheon keynote panel with Nicholas Carr of "IT Doesn't Matter" fame, along with another active CIO and a former IT researcher.

The initial question that we each were asked to address was this: What is the role of IT? Is it a strategic resource that enables an organization to differentiate its products or services, or is it merely a cost of doing business — an essential part of the organization but one focused on cutting costs and reducing risks?

Carr spoke before I did. He talked about how IT is essential but not strategic, since companies can no longer gain competitive advantage from computer systems because most are using similar software and thus can't differentiate themselves through technology.

I took a very different position, though in a very narrow sense I agreed with Carr. I don't believe IT systems are strategic. All strategies must start with the business strategy. But a business strategy without tactical support is like a general without an army. Once the company has decided on the strategy, then each department, including IT, must decide how it will execute the strategy. These discussions will result in the tactics that will bring the strategy to life.

Some strategies will require a large portion of IT tactics; others, fewer. In all cases, however, the resultant strategy is a business strategy, not an IT strategy. Using this process, incidentally, is how companies can be sure that IT stays aligned with the business.

In my mind, it's foolish to suggest that IT or any other department doesn't matter. All are there to do one thing: work together to enable the company to gain competitive advantage. How they tactically perform that job, whether by means of existing software or custom work, is a function of the strategy.

This could be the most important issue facing you and your profession.

I would suggest that if the strategy requires the systems to operate differently than those available on the market, then IT must develop custom code that will satisfy the strategy. IT should not force the strategy to change to accommodate existing software.

The IT industry must take a stand on this issue. As writers and pundits travel the conference circuit and preach their visions of the future, we must pay attention, understand the threats that are being suggested, and make our voices heard.

If corporate leaders believe that IT is going to become so easy and canned that the users will be able to run the technology, we will continue to see IT departments reduced and outsourced and offshored and treated like the utility that is envisioned.

But if this represents just another ivory tower idea like the paperless office and e-books, then IT practitioners have to speak up and convince those same leaders that IT is a valuable resource that must be nurtured. Otherwise, we are going to see a continuing reduction in IT college graduates as students follow more promising career paths. Companies will struggle to achieve that elusive competitive advantage as the number of first-rate minds in IT dwindles.

So here are a couple of action items. If you haven't done so, read Carr's article "IT Doesn't Matter." It's available on Amazon.com. After that, stand up and be counted. Let me know what you think IT's role will be in the future. Perhaps we can publish some of your comments in an upcoming article.

The outcome of this debate isn't going to affect me. I've had my time. However, this could be the most important issue facing you and your profession. Don't just stand there. Don't just watch. Get involved. ■

Paul M. Ingevaldson *retired as CIO at Ace Hardware Corp. in 2004 after 40 years in the IT business. Contact him at ingepi@aol.com.*

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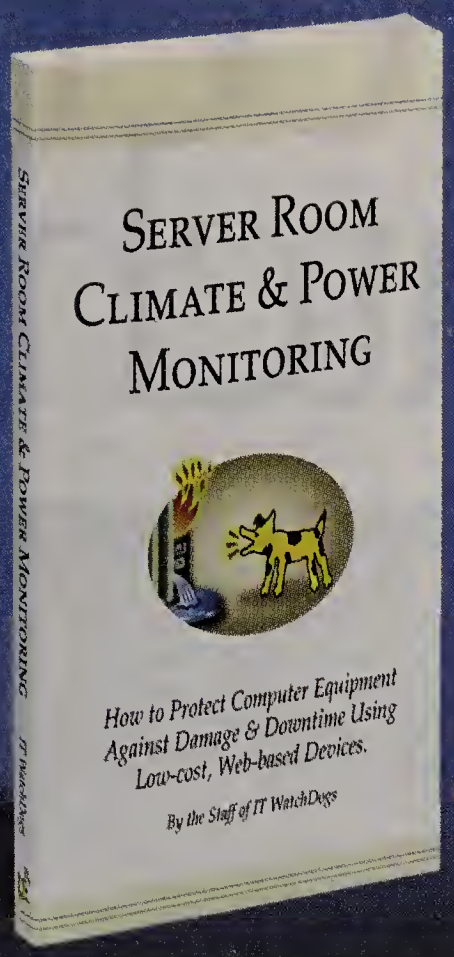

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Career Watch

New Stats on Women in IT

In November, the National Center for Women & Information Technology released its NCWIT Scorecard, which included these findings:

15% Share of computer science Advanced Placement test-takers who are girls.

21% Percentage of bachelor's degrees in CS awarded to women in 2006. That's down from 36% 23 years earlier.

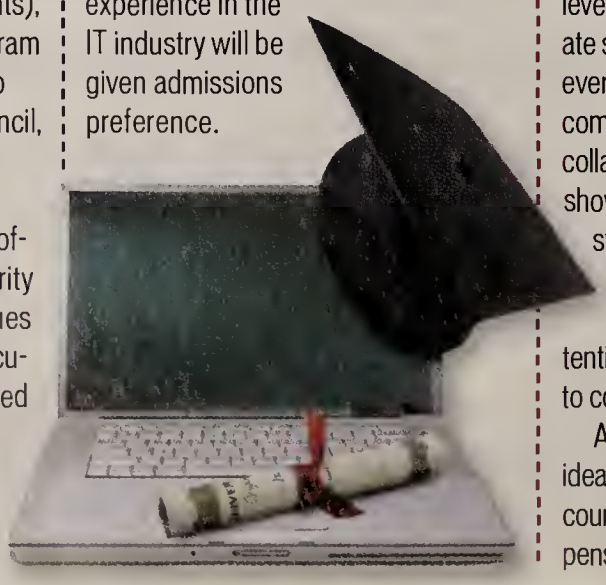
22% Share of software engineering jobs held by women. Overall, women hold half of the country's professional positions.

5% Percentage of Fortune 500 chief technology officers who are female.

The Hacker's Master's

EC-COUNCIL UNIVERSITY, a sister institution of the "ethical hacker" certification authority known as the EC-Council (International Council of Electronic Commerce Consultants), has established a master's program in security science. According to the Albuquerque-based EC-Council, the MSS program is suitable for students with a wide range of previous security experience. It offers high-level coverage of security principles and the emerging issues and technologies in network security. The MSS program is expected to take from one to two years to complete. Students should plan to study the course half-time while working in the security field in some capacity.

Applicants should have a bachelor's degree – in any discipline; those with at least two years of experience in the IT industry will be given admissions preference.



PAGE COMPILED BY JAMIE ECKLE.

■ **Q&A**

Stewart Tansley

The program manager for Microsoft Research's Institute for Personal Robots in Education discusses computer science education.

How can a robot address the "excitement deficit" in young people when it comes to studying computer science? Robots seem to captivate people – especially young people – in a rather special way. If you look at the history of robotics as a social phenomenon rather than solely as a technological evolution, you find the notion of an artificial person, or quasi-conscious machine, to be surprisingly deeply rooted – perhaps as old as history itself. It is this primal connection to robots that we are partly building on in our exploration of the technology.

One way we are trying to make education more fun and effective through the use of robotics is the [Institute for Personal Robots in Education]. Established in July 2006, IPRE is a collaborative research project hosted at the Georgia Institute of Technology with Bryn Mawr College. It is supported by seed funds for three years from Microsoft Research and the schools themselves.

IPRE's mission is broad: to employ robots in education at all levels, from middle school to graduate school. Our initial target, however, is introductory undergraduate computer science. Through our collaborative research, we hope to show that by empowering every student with their own personal robot, purchased with the class textbook, we can improve retention in and attraction of students to computer science.

An important component of this idea is that the robots for these courses must be reliable and inexpensive so that every student can have one. IPRE will keep the barrier to entry low for those professors interested in trying something new. In the end, robots are just one way to introduce more students to programming in these challenging times for computer science educators.

Is the program's introduction on schedule? At this time, we are on schedule, having completed pilot teaching trials at Georgia Tech and Bryn Mawr in spring 2007, and moving to broader teaching trials starting this past fall.

How about the expansion to other schools? In spring 2008, we will extend the reach of IPRE to perform teaching trials at other schools – potentially six to 12, but we are evaluating the appropriate number and approach. We are building a textbook based on the curriculum in parallel and refining the software and hardware. We will openly publish the scientific results of the effectiveness of the technology in class as soon as possible through regular academic channels (conferences and journals). Assuming the scientific results prove the utility of the approach, we will make the technology (hardware, software and curriculum) broadly available to the academic community. There would be little point in pushing a solution that was not thoroughly proven to be effective and the degree of its effectiveness quantified, so that professors can evaluate whether the approach is right for them, which we certainly hope. This is a central tenet of IPRE's approach.

– JAMIE ECKLE

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TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Password-Protected

Pilot fish creates an account for a new user, who tells fish that he has a hard time remembering things like usernames and passwords. "I suggested that he could write it on a small piece of paper until he memorized it, then destroy it," says fish. "I emphasized that he shouldn't write any other information on the paper in case he lost it, comparing it to writing your PIN on your ATM card. He reached in his wallet and pulled out his ATM card and said, 'Like this?' "

Numbers Game

This programming team is converting an application for a Beltway company that's so security-conscious, developers aren't even allowed to choose their own passwords. "We were assigned passwords, which we had no authority to change," reports a pilot fish there. And despite many good password rules, such as no more than two repetitions of a character in a row, what is fish's password? His birthday. Sighs fish, "Since I was born on Nov. 11, the first six digits of my password were 111119. I doubt that would pass *any* company's security rules for passwords."

It's Only Dumb If You Don't Ask

User needs VPN access, and this pilot fish sets it up, complete with a password that mixes digits with lowercase and capital letters. And fish wants to make sure user understands that this password is case-sensitive; to emphasize the capital letters, in his e-mail with the password, fish makes those characters both bold and underlined. Reply from user: "Thanks for helping me out yesterday. I've set up the VPN connection, but I can't get in. Probably because of the password's formatting. My (possibly dumb) question: How do I activate underlining of the letters in the password?"

There's Always A Reason

Senior sales exec calls this IT boss pilot fish to complain that he only receives e-mail from the company president when someone sends a "reply to all" message. How bad is the situation? "He claims he hasn't received an e-mail from the president for some time, and that 'it is imperative this get fixed immediately,' " says fish, who checks into it posthaste. "Inspection of his e-mail settings shows, first, junk filtering set to High; second, the president's e-mail address flagged as a 'suspected junk sender'; and last but certainly not least, all suspected junk mail to be immediately deleted. Can't imagine why he never received any of the president's mail."

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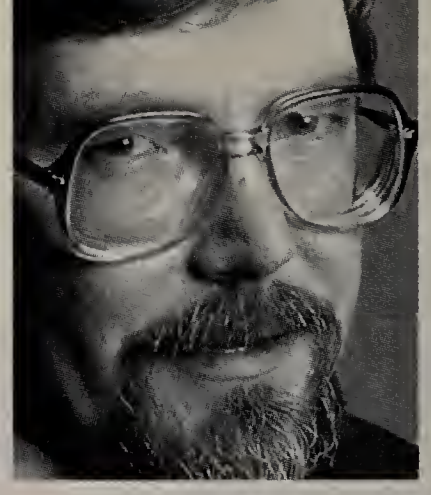

REMEMBER WHEN Oracle was a database vendor and Sun Microsystems sold workstations? Yes, you can still buy Oracle 11g or a Sun Ultra. But last week's big deals — Oracle's $8.5 billion buyout of BEA Systems and Sun's $1 billion deal for MySQL — remind us that the days when vendors fit into tidy niches are long gone.

They should remind us of something more fundamental, too.

On the surface, both deals just look like more IT industry consolidation. In Sun/MySQL, Sun gets the open-source database it's been hunting for since early 2005, plus some 10 million customers, 20% of whom already use Sun hardware. MySQL gets funding to grow. And potential MySQL customers get a big vendor to stand behind the product.

In Oracle/BEA, Oracle gets BEA's customers and revenue. BEA's customers get to be friends with all those PeopleSoft, Siebel and J.D. Edwards customers they'll share the corral with. BEA itself gets an end to its head-scratching search for an identity. (It's a transaction processing company! It's an application server company! It's a service-oriented architecture company!)

But there's something else going on here — something very good for corporate IT.

It wasn't that long ago when both Oracle and Sun made parts. Sure, they were best-of-breed parts, and you could use them in assembling one heck of a data center. But you needed lots of other parts too, from lots of other vendors. Putting them together was lots of work. And when things went wrong, there was lots of finger-pointing.

If, instead, you wanted the whole stack, you went to IBM. OK, or maybe DEC or HP or Unisys. But IBM dominated the data center, and it had since the days when "data processing" meant running cartloads of punch cards through collating and tabulating machines.

Customer data is not just the center of IT; it's the center of your whole business.

Those punch cards held customer data, and that data was at the center of the company's information infrastructure.

Fast-forward through tape and drum and disk storage, through mainframes and clusters and server farms, through proprietary networks and intranets, through paper reports and terminals and PCs — and customer data is *still* at the center of your company's information infrastructure. It's not just the center of IT; it's the center of your whole business.

Oracle figured that out a few years ago — that a database alone isn't enough. That's why Oracle has been acquiring all those enterprise applications, building out from the customer data at the center. BEA pushes things just a little farther.

For Sun's part, it started with networking (remember "The Network is the Computer"?) and then added Java to build out in the application direction. With MySQL, Sun can finally reach all the way in to support customer data.

See what they're doing? Oracle and Sun now know that making parts isn't enough. Sure, they want to grow and expand their revenues and customer bases. But more than that, they want to cover everything between that critical customer data and the people who'll use it to do business.

They'll cover that stack differently from each other, and differently still from IBM, HP, Microsoft and other enterprise vendors. And each different approach means more choices available for us.

That's good to know. And this is good to remember: What IT does is still all about customer data. Not algorithms, not protocols, not dandy hardware or gee-whiz software. They're all important, but in the end, what the business depends on IT for is that customer data at the center.

Oracle and Sun won't forget that. We shouldn't either. ■

Frank Hayes *is* Computerworld*'s senior news columnist. Contact him at frank_hayes@computerworld.com.*

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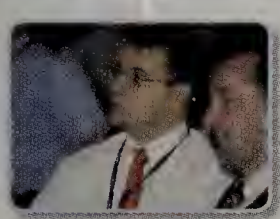

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